Florida Department of Environmental Protection

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

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

FINAL PERMITS

PERMITTEE

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

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

Project Nos. 0170035-014-AO and 0170035-015-AC
Permits Expire: 09/02/2016 (AO)
10/31/2011 (AC)
Compressor Station No. 26
Minor Air Operation and Construction Permits
Operation Permit Renewal and Construction Permit Modifications

These are the final air operation and construction permits, in one document. The operation permit incorporates a combustion turbine compressor engine (Turbine Compressor Engine No. 2603) previously permitted on Construction Permit 0170035-012-AC and renews the authorization to operate this natural gas pipeline compressor station facility. The construction permit authorizes the increase in maximum permitted fuel heat input rates for the combustion turbine compressor engines. Existing Compressor Station No. 26 (Standard Industrial Classification No. 4922) is located in Citrus County at 245 North Maylen Road in Lecanto in Lecanto, Florida. The UTM coordinates are Zone 17, 353.2 km East, and 3194.0 km North. As noted in the Final Determination provided with these final permits, no changes or only minor changes and clarifications were made to the draft permits.

This final document is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements and Facility-wide Specific Conditions

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, this document contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this document.

These air pollution permits are 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.). The permittee is authorized to conduct the proposed work in accordance with the conditions of these permits. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of these final permits, 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 30 days after this order is filed with the clerk of the Department.

Executed in Hillsborough County, Florida

_____ _____

Cindy Zhang-Torres, P.E. Effective Date
Air Permitting Manager
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permits and the Appendices) 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 _____ to the persons listed below.

David W. Shellhouse, Vice President, SE Operations, Florida Gas Transmission Company
Dave.Shellhouse@SUG.com)

Janice Taylor, Environmental Services, Florida Gas Transmission Company
(Janice.Taylor@SUG.com)

Thomas W. Davis, P.E., Environmental Consulting & Technology, Inc.
(tdavis@ectinc.com)

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.

_____ _____

(Clerk) (Date)

FACILITY AND CONSTRUCTION PERMIT PROJECT DESCRIPTION

Existing Facility

The existing natural gas pipeline compressor station facility consists of the following emissions units (EU)*.

Facility ID No. 0170035

EU ID No.*	Emission Unit (EU) Description
001	Turbine Compressor Engine No. 2601 - a Solar Model Taurus 60 T-7300S combustion turbine compressor engine rated at approximately 7,000 bhp with a maximum fuel heat input rate of 62 MMBtu/hour
004	Turbine Compressor Engine No. 2603 - a Solar Titan Model No. 130-20502SA combustion turbine compressor engine rated at approximately 20,500 bhp with a maximum fuel heat input rate of 158 MMBtu/hour

* *Emission Unit Notes* –

EU ID No. 002, Turbine Compressor Engine No. 2602, is no longer at the facility, as it was replaced by an electric drive compressor unit.

EU Nos. 003 and 005, created as part of Construction Permit 0170035-012-AC, are included in the Exempt Emission Units/Activities section below.

Construction Permit Project Description and Affected Emission Units

This project will modify the following emissions units as described below.

EU ID No.	Emission Unit(EU)Description
001	Turbine Compressor Engine No. 2601 - a Solar Model Taurus 60-7302S combustion turbine compressor engine rated at approximately 7,200 bhp with a maximum fuel heat input rate of **66.6** MMBtu/hour
004	Turbine Compressor Engine No. 2603 - a New Solar Titan Model No. 130-20502SA combustion turbine compressor engine rated at approximately 20,500 bhp with a maximum fuel heat input rate of **174.5** MMBtu/hour

This construction permit (0170035-015-AC) authorizes an increase in the maximum permitted fuel heat input rates for the above turbine compressor engines. The maximum heat input rate for Turbine Compressor Engine No. 2601 (EU No. 001) is increased from 62 to 66.6 MMBtu/hour. The maximum heat input rate for Turbine Compressor Engine No. 2603 (EU No. 004) is increased from 158 to 174.5 MMBtu/hour. The above increases in maximum permitted fuel heat input rate will also increase the maximum potential emission rates *(see Specific Condition Nos. A.4. and B.4.).*

NOTE: *Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.*

Exempt Emission Units/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)(Generic Emission Unit or Activity Exemption), F.A.C.

  (Emission Unit (EU) ID 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)(Stationary Reciprocating Internal Combustion Engines), F.A,C. 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.)

  (Emission Unit (EU) ID 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 has no 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 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a synthetic non-Title V source for the pollutants carbon monoxide (CO) and nitrogen oxides (NOx).

PERMIT HISTORY/AFFECTED PERMITS

This construction permit (Construction Permit 0170035-015-AC) modifies and replaces Construction Permits 0170035-011-AC (for Turbine Compressor Engine No. 2601), and 0170035-012-AC (for Turbine Compressor Engine No. 2603).

This facility operation permit renewal (Operation Permit 0170035-014-AO) replaces Operation Permit 0170035-010-AO, and incorporates terms and conditions of Construction Permits 0170035-012-AC and 0170035-015-AC.

SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC CONDITIONS (FINAL)

1. Permitting Authority - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Air Resource Management Section
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see above mailing address and phone number).

3. Appendices - The following Appendices are attached as part of this document:

a. Appendix A. Citation Formats and Glossary of Common Terms;
b. Appendix B. General Conditions;
c. Appendix C. Common Conditions; and
d. Appendix D. Common Testing Requirements.
e. Appendix NSPS 40 CFR 60 Subpart GG (Standards of Performance for Stationary Gas Turbines) (02-24-06 FR)
f. Appendix NSPS 40 CFR 60 Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) (03-20-09 FR)
g. Appendix NSPS 40 CFR 60 Subpart A (General Provisions for 40 CFR 60)

4. Applicable Regulations, Forms and Application Procedures - Unless otherwise specified in this document, 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 these permits 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 - Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Source Obligation - At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12), F.A.C.; Construction Permit 0170035-012-AC]

8. Annual Operating Report - On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority. *(See also Section 4. Appendix C, Condition 11.c.)*
[Rule 62-210.370(3), F.A.C.]

9. Operation Permit Renewal Application - A completed application for renewal of the operation permit shall be submitted to the Permitting Authority no later than 60 days prior to the expiration date of the operation permit. 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.;

c. copies of the most recent compliance test reports required by Specific Condition No. A.5., A.6., and B.5., if not previously submitted.

[Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.]

A. EU No. 001 - Turbine Compressor Engine No. 2601

This section of the document addresses the following emissions unit (EU).

EU ID No.	Emission Unit (EU) Description
001	Turbine Compressor Engine No. 2601 – 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.

*(**NOTE** – See also Subsection C. Common Specific Conditions for EU Nos. 001 and 004 – Turbine Compressor Engine Nos. 2601 and 2603.)*

PERFORMANCE RESTRICTIONS

A.1. Federal New Source Performance Standard (NSPS) Requirements - Turbine Compressor Engine No. 2601 is subject to and shall meet all the applicable requirements of the Federal New Source Performance Standards (NSPS) 40 CFR 60 Subpart GG (Standards of Performance for Stationary Gas Turbines) (*see applicable provisions references below)*, and Subpart A (General Provisions for 40 CFR 60), as included in the attached Appendix NSPS 40 CFR 60 Subpart GG and Appendix NSPS 40 CFR 60 Subpart A, which are both made a part of this permit.

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)

(continued)

A.1. *(continued)*

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.; NSPS 40 CFR 60 Subparts GG and A; Construction Permit 0170035-011-AC]

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.
[Rules 62-4.070(3), and 62-210.200 (Potential to Emit), F.A.C.; Construction Permits 0170035-011-AC and 0170035-015-AC]

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.
[Rule 62-204.800(8) F.A.C.; and Subpart GG - 40 CFR 60.333(a); Construction Permit 0170035-011-AC]

(NSPS Subpart GG SO_2 Limit 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. EU No. 001 - Turbine Compressor Engine No. 2601

EMISSIONS STANDARDS

A.4. Emissions Limits - Emissions from the combustion turbine engine shall not exceed the following limits for nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO_2), and visible emissions (VE).

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

Notes -

a. Equivalent Maximum 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) *(shown in the table above).* 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.)

(continued)

A.4. *(Notes continued)*

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.

[Rules 62-4.070(3), 62-204.800(8), and 62-210.200 (Definition of Potential to Emit), F.A.C.; 40 CFR 60.332(a) and 60.333 (Subpart GG); Construction Permits 0170035-011-AC and 0170035-015-AC]

COMPLIANCE TESTING REQUIREMENTS

A.5. Annual Visible Emissions (VE) Compliance Test - The exhaust stack for Turbine Compressor Engine No. 2601 shall be tested for visible emissions (VE) annually during each federal fiscal year (October 1 - September 30). 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.
[Rules 62-297.310(7)(a)4.a., and 62-297.310(8), F.A.C.; Construction Permit 0170035-011-AC, as established in Construction Permit 0170035-008-AC]

A.6. Compliance Tests for NOx and CO Prior to Renewal of Operation Permit - During the 12-month period prior to submittal of an application for renewal of the air operation permit, the exhaust stack for Turbine Compressor Engine No. 2601shall be tested to demonstrate compliance with the emission standards for carbon monoxide (CO) and nitrogen oxides (NOx). 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.
[Rules 62-297.310(7)(a)3, and 62-297.310(8), F.A.C.; NSPS Subpart GG 40 CFR 60.334; Construction Permit 0170035-011-AC, as established in Construction Permit 0170035-008-AC]

B. EU 004 - Turbine Compressor Engine No. 2603

This section of the document addresses the following emissions unit (EU).

EU ID No.	Emission Unit (EU) Description
004	Turbine Compressor Engine No. 2603 - 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.

*(**NOTE** – See also Subsection C. Common Specific Conditions for EU Nos. 001 and 004 - Turbine Compressor Engine Nos. 2601 and 2603.)*

APPLICABLE FEDERAL REGULATIONS

B.1. Federal New Source Performance Standard (NSPS) Requirements - Turbine compressor engine No. 2603 is subject to and shall comply with the applicable requirements (*see applicable provisions references below)* of Federal New Source Performance Standards (NSPS) 40 CFR 60 KKKK (Standards of Performance for Stationary Combustion Turbines), and 40 CFR 60 Subpart A (General Provisions for 40 CFR 60), as included in the attached Appendix 40 CFR 60 Subpart KKKK and Appendix NSPS 40 CFR 60 Subpart A, which are both made a part of this permit.

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"

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

[Rule 62-204.800(8), F.A.C.; NSPS 40 CFR 60 Subparts A and KKKK; Construction Permit 0170035-012-AC]

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.
[Rule 62-210.200(PTE), F.A.C.; Construction Permits 0170035-012-AC and 0170035-015-AC]

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.
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and NSPS Subpart KKKK in 40 CFR 60; Construction Permit 0170035-012-AC]

(NSPS Subpart KKKK SO_2 Limit 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).)

EMISSIONS STANDARDS

B.4. Emissions Standards - The combustion turbine engine shall not exceed the following emission limits for carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and visible emissions (VE).

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

Notes -

a. This state 15 ppmvd limitation is more stringent than, and therefore satisfies, the NSPS Subpart KKKK 40 CFR 60.4320 limitation contained in Table 1 to Subpart KKKK and shown in the table above.

b. 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.)

c. 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.)

B.4. *(Notes continued)*

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

e. 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).

f. 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.

[Rules 62-4.070(3), 62-204.800(8), and 62-210.200 (Definition of Potential to Emit), F.A.C.; 40 CFR 60.4320; and 40 CFR 60.4330; Construction Permits 0170035-012-AC and 0170035-015-AC]

COMPLIANCE TESTING REQUIREMENTS

B.5. Annual CO, NOx and VE Compliance Tests - During each federal fiscal year (October 1 - September 30), the combustion turbine engine shall be tested to demonstrate compliance with the emission 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 *(see Item 1. in Section 4 Appendix D).*
[Rules 62-4.070(3), 62-204.800(8), and 62-297.310(7)(a)4, F.A.C.; and NSPS Subpart KKKK 40 CFR 60.4400(a); Construction Permits 0170035-012-AC and 0170035-015-AC]

C. Common Conditions for EU Nos. 001 and 004 - Turbine Compressor Engine Nos. 2601 & 2603

This section of the document addresses Specific Conditions that are common to both Emission Unit (EU) Nos. 001 and 004 (Turbine Compressor Engine Nos. 2601 and 2603):

PERFORMANCE RESTRICTIONS

C.1. Maximum Operating Hours - The turbine compressor engines are permitted for continuous operation (i.e., 8,760 hours/year).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; Construction Permits 0170035-011-AC and 01700350-012-AC]

COMPLIANCE TESTING REQUIREMENTS

C.2. Compliance Test Requirements - Compliance tests shall be conducted in accordance with the applicable requirements specified in Section 4 Appendix D (Common Testing Requirements) of this document.
[Rule 62-297.310, F.A.C.]

C.3. Compliance Test Methods - Required compliance tests shall be performed in accordance with the following reference methods.

Method(s)	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 (NOx) Emissions from Stationary Sources Determination of Nitrogen Oxide (NOx) Emissions from Combustion Turbines
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 (CO) 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 method(s) are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800(8), F.A.C. No other method(s) may be used unless prior written approval is received from the Department.

[Rules 62-204.800(8), 297.310, and 297.401, F.A.C.; NSPS Subpart GG 40 CFR 60.335; NSPS Subpart KKKK 40 CFR 60.4400, 40 CFR 60 Appendix A; Construction Permits 0170035-011-AC and 0170035-012-AC]

C.4. Stack Sampling Facilities - The minimum requirements for stack sampling facilities shall be in accordance with Rule 62-297.310(6), F.A.C.
[Rule 62-297.310(6), F.A.C.]

RECORDS AND REPORTS

C.5. Compliance Test Reports - The permittee shall prepare and submit reports for all required compliance tests in accordance with the requirements specified in Section 4 Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall identify 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.
[Rule 62-297.310(8), F.A.C.; 40 CFR 60.8; Construction Permits 0170035-011-AC; 0170035-012-AC and 0170035-015-AC]

C.6. Operational Data Records - 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. This information shall also be used for submittal of the required Annual Operating Report.
[Rule 62-4.070(3), F.A.C.; Construction Permits 0170035-011-AC and 0170035-012-AC]

NOTIFICATION REQUIREMENTS

C.7. Compliance Test Notification –

a. The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required compliance tests, except as noted in b. below.

b. The permittee shall notify the Compliance Authority in writing at least **30** days prior to any required nitrogen oxides compliance tests for Turbine Compressor Engine No. 2603.
[Rule 62-204.800(8), F.A.C.; NSPS Subpart KKKK 40 CFR 60.4400 and Subpart A 40 CFR 60.8(d)]

The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.

(*Permitting Note - The notification should also include the relevant emission unit ID No(s)., test method(s) to be used, and pollutants to be tested.*)

[Rules 62-4.070(3), 62-204.800(8), and 62-297.310(7)(a)9., F.A.C.; NSPS Subparts KKKK and A]

C.8. Component Replacements - 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.
[Rule 62-210.200 (Definition of Innovative Control Technology), F.A.C.]

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.
[Rules 62-4.130, 62-4.160(2), (6), and (15) and 62-297.310(7)(b), F.A.C.]

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.

[Rules 62-4.130, 62-4.160(2), (6), and (15), 62-210.200, and 62-297.310(7)(b), F.A.C.; Construction Permits 0170035-011-AC and 0170035-012-AC]