Florida Gas Transmission Company
Gadsden Compressor Station No. 14
Facility ID No.: 0390029
Gadsden County

Title V Air Operation Permit Revision

PROPOSED Permit No.: 0390029-013-AV
Revision to Title V Air Operation Permit No.: 0390029-010-AV

Permitting and Compliance Authority:
Florida Department of Environmental Protection
Northwest District Air Program
160 W. Government Street, Suite 308
Pensacola FL 32502-5740

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Table of Contents

Section **Page Number**

Placard Page..... 1

I. Facility Information..... 2
A. Facility Description.
B. Summary of Emissions Unit ID No(s). and Brief Description(s).
C. Relevant Documents.

II. Facility-wide Conditions..... 5

III. Emissions Unit(s) and Conditions
A. 001-003 & 005 Internal Combustion Engines No. 1401–1403 & 1405..... 8
B. 004 Internal Combustion Engine No. 1404..... 9
C. 006 Internal Combustion Engine No. 1406..... 13
D. 008 Solar Mars Turbine Compressor No. 1407..... 17
E. 010 Pignone Turbine Compressor No. 1408..... 22
F. 011 Solar Titan 130-20502S Combustion Turbine No. 1409……..… 27
G. 009 Emergency Generator FGTC GEN03 & Miscellaneous Equipment .……31
H. 012 Emergency Generators GEN04 and FGTC GEN05……...34

Permittee:	PROPOSED Permit No.: 0390029-013-AV
Florida Gas Transmission Company	Facility ID No.: 0390029
Gadsden Compressor Station No. 14	SIC No(s).: 49, 4922
	Project: Title V Air Operation Permit Revision

This permit revision is being issued for the purpose of incorporating the terms and conditions of construction permit No. 0390029-011-AC, and a revision to permit 0390029-011-AC, by construction permit 0390084-012-AC, in combined processing with this revision permit. This existing facility is located at 3690 Hosford Highway, Quincy, Gadsden County; UTM Coordinates: Zone 16, 719.97 km East and 3377.39 km North; and, Latitude: 30° 30' 38" North and Longitude: 84° 42' 28" West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named Permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix SS-1, STACK SAMPLING FACILITIES version dated 10/07/96
Appendix TV-6, TITLE V CONDITIONS version dated 6/23/06
Appendix 40CFR60 GG
Appendix 40CFR60 JJJJ
Appendix 40CFR60 KKKK
Appendix 40CFR63 YYYY
Appendix 40CFR63 ZZZZ
TABLE 297.310-1, CALIBRATION SCHEDULE version dated 10/07/96
Attachment 1, Turbine Performance Curves (Solar Mars 90T, No. 1407)
Attachment 2, Turbine Performance Curves (Pignone 10B, No. 1408)

Initial Effective Date: June 24, 2008
Revision Effective Date: [ARMS Day 55+1]
Renewal Application Due Date: November 11, 2012
Expiration Date: June 24, 2013

_____
Rick Bradburn
Air Program Administrator

RB/rp/c

Section I. Facility Information

This is a revision to Title V renewal permit 0390029-010-AV, effective June 24, 2008 to incorporate permit 0390029-011-AC, effective April 22, 2009 and permit 0390084-012-AC, in combined processing with this permit revision.

Permit 0390029-011-AC allowed the construction of a new gas combustion turbine engine, two 454 bhp emergency generators and one 500 gallon oily water tank. Permit 0390029-012-AC allows increasing the new turbine's maximum allowable heat input rate from 158 to 165 MMBtu per hour to increase the power output from 19,465 to 20,500 bhp (ISO) and increases the new turbine's maximum allowable emissions of carbon monoxide, nitrogen oxides, particulate matter and PM10, sulfur dioxide, and volatile organic compounds to 39.4, 38.9, 4.77, 19.9, and 2.29 tons per year, respectively. The new generators' engines become subject to 40 CFR 60 Sp JJJJ and 40 CFR 63 Sp ZZZZ because they were manufactured after January 1, 2009 and are put into a new emissions unit (012) with those requirements.

Subsection A. Facility Description

The existing facility is part of a natural gas transmission pipeline system and contains six natural gas fired internal combustion reciprocating engines and three natural gas-fired gas combustion turbines. The engines provide power for compressors to move the gas along the pipeline.

Emissions units 001 through 003 and 005 (FGT Engines Nos.1401, 1402, 1403, and 1405) are reciprocating internal combustion (IC) engines, manufactured by Worthington, model SEHG-8. The engines are fired by pipeline natural gas (NG) and each is rated at 2,000 BHP with a maximum heat input rating of 15 MMBtu/hr. The engines are naturally aspirated and operate at near stoichiometric air-to-fuel ratio. NOx and carbon monoxide (CO) are emitted uncontrolled through raised stacks. Engines 1401-1403 were originally placed in service in 1958, while engine 1405 was originally placed in service in 1968.

Emissions unit 004 (FGT Engine No. 1404) is a reciprocating IC engine, manufactured by Worthington, model SEHG-8. This engine is fired by pipeline natural gas and is rated at 2,000 BHP with a maximum heat input rating of 16.5 MMBtu/hr. This engine was initially placed in service in 1966 and was modified by permit 0390029-003-AC allowing an improved turbocharger providing more air at higher pressures to reduce NOx emissions and offset other emission increases (up-rating of 1407 and construction of 1408). In addition, this engine has a catalytic converter to reduce CO emissions.

Emissions unit 006 (FGT Engine No. 1406) is a reciprocating IC engine, manufactured by Cooper-Bessemer, model GMVR-12C. This engine is fired by pipeline natural gas and rated at 2,700 BHP with a maximum heat input rating of 21.69 MMBtu/hr. This engine was initially placed in service in 1991. This engine incorporates "lean burn" technology to minimize NOx emissions. This engine is subject to a Best Available Control Technology (BACT) determination of 2 g/BHP-hr NOx (equivalent of 10.6 lbs/hr and 46.3 TPY) incorporated into permit AC20-189438 (PSD-FL-159) and established in accordance with Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD).

Emissions unit 008 (FGT Engine No. 1407) is a gas combustion turbine manufactured by Solar, model Mars 90 T13002S. This gas combustion turbine is fired by pipeline natural gas and rated

at 13,000 BHP at ISO conditions with a maximum heat input of 112.8 MMBtu/hr at ISO conditions. Heat input rate will vary depending upon gas turbine characteristics, load, and ambient conditions. This gas combustion turbine was initially placed in service in 2001 and subsequently was up-rated by permit 0390029-003-AC. This turbine incorporates an efficiently operated dry low-NOx combustion system to minimize NOx emissions. The initial construction, permit 0390029-002-AC, of this unit avoided PSD requirements. However, Engine No. 1404 was simultaneously modified at the time of up-rating of Engine No. 1407 and the installation of gas combustion turbine engine No. 1408 (the Pignone PGT-10B) to provide an emission offset for PSD/NSR review avoidance (permit 0390029-003-AC).

Emissions unit 010 (FGT Engine No. 1408) is a gas combustion turbine manufactured by Nuovo Pignone, model PGT-10B. This gas combustion turbine is fired by pipeline natural gas and rated at 15,700 BHP at ISO conditions with a maximum heat input of 134.8 MMBtu/hr at ISO conditions. Heat input rate will vary depending upon gas turbine characteristics, load, and ambient conditions. This gas combustion turbine was initially placed in service in 2002. This turbine incorporates dry low-NOx combustion technology to minimize NOx emissions. FGT Engine No. 1404 was modified to offset emissions increases due to the up-rating of the Solar turbine (FGT Engine No. 1407) and the construction of this compressor engine (FGT Engine No. 1408) as authorized in permit 0390029-003-AC.

Permit 0390029-011-AC, effective April 22, 2009 added emissions unit 011, compressor Engine (FGT Engine No.1409), a Solar Titan Model No. 130-20502S gas combustion turbine. The combustion turbine fires approximately 151,800 cubic feet per hour of pipeline natural gas (SCC No 2-02-002-54) at maximum permitted capacity. At 165 MMBtu per hour of heat input, the combustion turbine produces approximately 20,500 bhp. Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in lower emissions of carbon monoxide and volatile organic compounds. Lean premix combustion technology minimizes the formation of nitrogen oxides. When operating at capacity, exhaust gases exit a 55 feet tall stack that is 7.5 feet x 8 feet in diameter with a flow rate of approximately 232,782 acfm at 944° F.

Internal combustion engines (Nos. 1401 - 1406) and combustion turbines (Nos. 1407 and 1408) are subject to (MACT) 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines and Subpart YYYY - NESHAP for Stationary Combustion Turbines, respectively. However, based on rules 40 CFR 63.6090(b)(4) and 63.6590(b)(3) the units do not have to meet the requirements of the Subparts or Subpart A. In addition, no initial notification is required. Be aware that any future reconstruction (defined in 40 CFR 63.2) may result in this equipment becoming subject to these rules. Compressor Engine (FGT Engine No.1409) was installed on December 16, 2010 and is subject to 40 CFR 60 Subpart KKKK - NSPS for Stationary Combustion Turbines and 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines. The two 454 Hp engines for the new emergency generators are subject to the limits from table 1, and the certification, maintenance and recordkeeping requirements of 40 CFR 60 Subpart JJJJ - Stationary Spark Ignition Internal Combustion Engines. By meeting the applicable requirements of 40 CFR 60 Subpart JJJJ, the two 454 Hp engines for the new emergency generators also meet applicable requirements in 40 CFR 63, NESHAP Subparts A and ZZZZ - Reciprocating Internal Combustion Engines.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Revision application received June 2, 2011, this facility is a major source of hazardous air pollutants (HAP).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description

EU I.D.	Brief Description
001-003 & 005	Internal Combustion Engine No. 1401, 1402, 1403, 1405
004	Internal Combustion Engine No. 1404
006	Internal Combustion Engine No. 1406
008	13,000 BHP Solar Mars Combustion Turbine Unit No. 1407
009	Emergency Generator: FGTC GEN03 & Miscellaneous Equipment
010	Nuovo Pignone PGT10B Combustion Turbine No. 1408
011	Solar Titan 130-20502S Combustion Turbine No. 1409
012	Emergency Generators: FGTC GEN04 and FGTC GEN05

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Appendix A-1: Abbreviations, Acronyms, Citations, and Identification Numbers
Statement of Basis

These documents are on file with the permitting authority:
Appendix H-1: Permit History
Application for a Title V Air Operation Permit Revision received June 2, 2011. Application was complete.

Section II. Facility-wide Conditions

The following conditions apply facility-wide:

1. APPENDIX TV-6, TITLE V CONDITIONS, is a part of this permit.

2. General Pollutant Emission Limiting Standards - Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C., and permit 0390039-003-AC]

3. General Particulate Emission Limiting Standards - General Visible Emissions Standard
Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. [Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. Permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 10162
Fairfax, VA 22038
Telephone: 703/227-7650

and,
b. Permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. Permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Nothing was deemed necessary and ordered at this time. [Rule 62-296.320(1), F.A.C., and permit 0390029-003-AC]

6. Emissions of Unconfined Particulate Matter. Pursuant to Rule 62-296.320(4)(c), F.A.C., and the application, this facility has no emissions of unconfined particulate matter (see Condition 57 of APPENDIX TV-6, TITLE V CONDITIONS). [Rule 62-296.320(4)(c), F.A.C., and permit 0390029-003-AC]

7. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one. [Rule 62-213.440, F.A.C.]

8. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 days after the

end of the calendar year using DEP Form No. 62-213.900(7), F.A.C. [Rules 62-213.440(3), and 62-213.900, F.A.C.]
{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51 of APPENDIX TV-6, TITLE V CONDITIONS)}

9. Permittee shall submit all compliance related notifications and reports required of this permit to the Department's Northwest District Office.

Department of Environmental Protection
Northwest District Air Program
160 W. Government Street, Suite 308
Pensacola, Florida 32502-5740
Telephone: 850/595-8300; Fax: 850/595-8096

Notification of compliance testing may be submitted by electronic mail to nwdair@dep.state.fl.us. A copy of all compliance related notifications shall be sent to the Northwest District Branch Office in Tallahassee at 2815 Remington Green Circle, #A, Tallahassee FL 32308.

10. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

11. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information. [Rule 62-213.420(4), F.A.C.]

12. Internal combustion engines (FGT Nos. 1401 - 1406), and combustion turbines (FGT Nos. 1407 and 1408), are subject to (MACT) 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines, and Subpart YYYY - NESHAP for Stationary Combustion Turbines, respectively. However, based on rules 40 CFR 63.6090(b)(4) and 63.6590(b)(3) the units do not have to meet the requirements of the Subparts or Subpart A. In addition, no initial notification is required. Be aware that any future reconstruction (defined in 40 CFR 63.2) or installation of new equipment (IC engines or turbines) may result in the equipment becoming subject to one these rules. [Rule 62-204.800(11), F.A.C., 40 CFR 63 Subpart ZZZZ, and 40 CFR 63 Subpart YYYY]

13. Source Obligation

(a) 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.

(b) 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 exceeding its projected actual emissions, 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.]

14. Actual Emissions Reporting. This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., Permittee is subject to the following monitoring, reporting and recordkeeping provisions.

a. Permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of ten years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.
b. Permittee shall report to the Department within 60 days after the end of each calendar year during the ten-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:
    1) The name, address and telephone number of the owner or operator of the major stationary source;
    2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;
    3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
    4) Any other information that the owner or operator wishes to include in the report.

For this project, the Department requires the annual reporting of actual nitrogen oxide emissions for the following units:

011 Solar Titan 130-20502S Gas Combustion Turbine No. 1409
012 Emergency Generators: FGTC GEN04 and FGTC GEN05

[Applications 0390029-011 & 012- AC; Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

Section III. Emissions Unit(s) and Conditions

Subsection A. This section addresses the following emissions units

E.U. ID No.	Brief Description
001-003 & 005	Internal Combustion Engine Nos. 1401, 1402, 1403 and 1405

Engine Nos. 1401-1403 and 1405 are natural gas fired reciprocating IC engines manufactured by Worthington (Model SEHG-8) and installed in 1958 (engine Nos. 1401-1403) and 1968 (engine No. 1405). These engines are rated at 2,000 BHP with a heat input of 15 MMBtu/hr. The engines are naturally aspirated and operate at near stoichiometric air-to-fuel ratio. NOx and CO are emitted uncontrolled through raised stacks.

This emissions unit is subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines, adopted and incorporated by reference in Rule 62-204.800(11), F.A.C.

Essential Potential to Emit (PTE) Parameters

A.1. Heat Input. The maximum heat input shall not exceed 131,400 MMBtu per rolling 12-month period for each engine (Nos. 1401, 1402, 1403 and 1405). Rolling 12-month totals shall be maintained and made available on site for a minimum of five years for Department inspection. For compliance testing purposes, the maximum heat input rate shall not exceed 15 million Btu per hour for each engine. [Rules 62-4.160(2) and 62-210.200(243), F.A.C.]
{Permitting Note: The hourly heat input limitation has been included to identify the capacity of each unit, to establish a compliance testing operating rate and to aid in determining future rule applicability. The hourly heat input is not to be construed as an operating limit during normal operation.}

A.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year. [Rules 62-4.160(2) and 62-210.200(243), F.A.C.]

{Permitting Note: This emission unit is also subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines. See Facility-Wide Condition s for applicable requirements.}

Subsection B. This section addresses the following emissions unit

E.U. ID No.	Brief Description
004	Internal Combustion Engine No. 1404

Engine No. 1404 is a natural gas fired reciprocating IC engine manufactured by Worthington (Model SEHG-8) and installed in 1966. This engine is rated at 2,000 BHP with a heat input of 16.5 MMBtu/hr.

Permit 0390029-003-AC, issued August 14, 2001, required the installation of an improved turbocharger to provide more air at increased pressure to reduce NOx emissions, and a catalytic converter to reduce CO emissions. These modifications offset potential emission increases resulting from the up-rating and construction of other compressor engines (Nos. 1407 & 1408). The permit included specific emission limits for CO (0.8 gm/BHP-hr), NOx (9.2 gm/BHP-hr), SO_2 (10grains sulfur/100SCF), and opacity (10%).

Since these engines were modified to reduce and offset emissions to avoid PSD/NSR, the basis for the applicable requirements is pursuant to Rule 62-212.400, F.A.C. This emission unit is subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines, adopted and incorporated by reference in Rule 62-204.800(11), F.A.C.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum heat input rate to each engine shall not exceed 16.5 MMBtu per hour while producing approximately 2,000 BHP, based on a higher heating value (HHV) of 1,040 Btu per hour SCF for natural gas. [Rules 62-4.160(2) and 62-210.200 (243), F.A.C., and permit 0390029-003-AC]
{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each reciprocating engine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

B.2. Authorized Fuel. This modified reciprocating compressor engine shall fire only pipeline quality natural gas with a maximum of 10 grains sulfur per 100 standard cubic feet of natural gas. [Rule 62-213.410, F.A.C., and permit 0390029-003-AC]

B.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200(243), F.A.C., and permit 0390029-003-AC]

Emission Limitations and Standards

B.4. Emissions from this modified reciprocating compressor engine shall not exceed the following limits:

POLLUTANT	STANDARDS	EQUIVALENT (lb/hr)	EQUIVALENT (tons/year)
Nitrogen Oxides	9.2 gram/BHP-hour	40.6	177.83
Carbon Monoxide	0.8 gram/BHP-hour	3.5	15.33
Sulfur Dioxide	10 grains S/100 scf	0.5	2.19
Opacity	10% opacity - 6-min ave.	Not Applicable	Not Applicable
Particulate Matter	Good combustion	0.2	0.88
Volatile Organic Compounds	Good combustion	0.4	1.75

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.
b. The NOx standard is based on a 3-hour test average as determined EPA Method 7E.
c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO_2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 scf of natural gas from the pipeline (compliance by record keeping).
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 data in Table 3.2-2 of AP-42 (factor: 0.00999 lb/MMBtu). Equivalent maximum VOC emissions are based on test data (factor: 0.1 g/BHP-hr). No testing required.
f. Equivalent maximum emissions are based on the maximum expected emissions (or the emissions standard) at permitted capacity and 8,760 hours of operation per year.
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.
[Avoid Rule 62-212.400, F.A.C., and permit 0390029-003-AC]

Excess Emissions

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

B.5. Excess Emissions
(1) Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and 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.
(2) Excess emissions that are 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.
(3) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
(4) In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department 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.

Test Methods and Procedures

{Permitting Note: Unless otherwise specified, the averaging times are based on the specified averaging time of the applicable test method.}

B.6. Emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted once during each federal fiscal year (October 1 to September 30) unless otherwise noted in specific conditions. Results shall be submitted to the Department within 45 days after testing. For each test run, the report shall also indicate the natural gas firing rate (cubic feet per hour), heat input rate (MMBtu per hour), and the power output (BHP). The Department shall be notified at least 15 days prior to testing to allow witnessing. [Rule 62-297.310, F.A.C.]

Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions 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. [Rules 62-297.310(2) & (2)(b), F.A.C.]

B.7. Nitrogen Oxides. The test method for nitrogen oxides shall be EPA Method 7E, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

B.8. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10, incorporated and adopted by reference in Chapter 62-297, F.A.C. CO performance testing shall be conducted once, concurrently with NOx testing, within the 12-month period prior to expiration of this permit (once every five years). [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

B.9. Sulfur Dioxide. Emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. Compliance with the SO_2 emissions limit can be determined by calculations based on fuel analysis using ASTM D4084-82, D3246-81, D5504-98, or an approved alternative method for sulfur content of gaseous fuels. [Rules 62-297.401, 62-297.440, F.A.C., and permit 0390029-003-AC]

B.10. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]
{Permitting Note: Compliance verification for PM and VOC emissions are denoted in Specific Condition B.4's notes.}

Record Keeping and Reporting

B.11. Permittee shall adequately monitor the fuel consumption rate and hours of operation for use in submittal of the required Annual Operating Report (AOR). [Rule 62-4.070(3), F.A.C., and permit 0390029-003-AC]

B.12. During each complete engine analysis performed according to the facility Standard Operating Procedure (SOP) H.12; a trained technician shall adjust engine performance as necessary. Engine operation shall not exceed 1440 hours between analyses except under those circumstances outlined in the SOP. These analyses shall be recorded in a permanent log and made available for inspection upon request of the Department. [Rule 62-4.070(3), F.A.C., and permit 0390029-003-AC]

Other Requirements

B.13. 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 may 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.]

{Permitting Note: This emission unit is also subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines. See Facility-Wide Conditions for applicable requirements.}

Subsection C. This section addresses the following emissions unit

EU I.D.	**Brief Description**
006	Internal Combustion Engine No. 1406

Engine No. 1406 is a natural gas fired reciprocating IC engines manufactured by Cooper-Bessemer (model GMVR-12C) and was placed in service in 1991. This engine incorporates "lean burn" technology to minimize NOx emissions.

Permit AC20-189438 (PSD-FL-159) was issued May 8, 1991, and included a BACT determination for NOx of 2.0 g/BHP-hr, which was modified, along with other pollutant factors, on September 17, 1993, to 1.78 g/BHP-hr. This permit included limits of NOx, 10.6 lbs/hr; CO, 1.11 lbs/hr; VOC, 2.6 lbs/hr; PM (TSP and PM_{10}), 0.08 lbs/hr; and SO_2, 0.46 lbs/hr. Visible emissions are limited to 10% opacity.

Subsequent to issuance of the construction permit, the PM emission factor has increased, resulting in increased calculated emissions associated with this engine. The PM limit in the permit was based on an assumed emission factor with no regulatory basis, and actual emissions have not changed. Permit 0390029-006-AC, issued simultaneously with Title V permit renewal 0390029-010-AV, supersedes the PM emission standards of permit AC20-189438 (PSD-FL-159) and replaces them with the requirement that PM emissions be minimized by good combustion design with the exclusive firing of natural gas.

This emission unit is subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines, adopted and incorporated by reference in Rule 62-204.800(11), F.A.C

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Capacity. The maximum allowable operating rate (rated capacity) is 2,700 BHP (full speed, full load, 100°F ambient site temperature). Fluctuations in measured BHP, plus or minus ten percent (± 10%) may occur as a result of natural uncontrolled fluctuations in ambient temperature, ambient pressure, fuel temperature, and a pulsation phenomenon inherent to the operation of reciprocating compressor engines. [Rules 62-4.160(2), and 62-210.200 (243), F.A.C, and permit AC20-189438, issued May 9, 1991 and modified September 17, 1993]

C.2. Heat Input. The maximum heat input rate shall not exceed 21.69 million Btu per hour. [Rules 62-4.160(2), and 62-210.200 (243), F.A.C., and permit AC20-189438 issued May 9, 1991 and modified September 17, 1993]
{Permitting Note: Based on an assumed heat value of 1,040 Btu/scf of gas. The maximum heat input rates are based on the manufacturer's equipment specifications for each reciprocating engine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

C.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and permit AC20-189438, issued May 9, 1991]

C.4. Fuel Consumption. The maximum natural gas consumption shall not exceed 20,856 scf per hour. Records shall be kept of monthly natural gas consumption and shall be averaged to determine hourly consumption. These records shall be maintained on site for a period of five years and shall be made available for Department inspection as necessary.
[Rule 62-210.200(243), F.A.C., and permit AC20-189438, issued May 9, 1991 and modified September 17, 1993]
{Permitting Note: Based on an assumed heat value of 1,040 Btu/scf of gas.}

Emission Limitations and Standards

C.5. The maximum allowable emission rate shall not exceed the emission rates as follows:

POLLUTANT	Emission Rate (lb/hr)	Emission Rate (tons/year)
Nitrogen Oxides	10.6	46.4
Carbon Monoxide	11.1	48.7
Volatile Organic Compounds	2.6	11.5
Particulate Matter (TPS) *	Good Combustion - natural gas	Good Combustion - natural gas
Particulate Matter (PM_{10}) *	Good Combustion - natural gas	Good Combustion - natural gas
Sulfur Dioxide	0.46	2.0
Visible Emissions	10% opacity	10% opacity

*(*Note: new standards for PM/PM_{10} are due to changes made by permit 0390029-006-AC, issued simultaneously with this Title V permit renewal. Previous PM/PM_{10} limits were 0.08 tons/hr and 0.4 tons/yr.)*
[Permit AC20-189438, PSD-FL-159]

Excess Emissions

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

C.6. Excess Emissions
(1) 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.
(2) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
(3) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
(4) In case of excess emissions resulting from malfunctions, each owner or operator 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, F.A.C.]

Test Methods and Procedures

{Permitting Note: Unless otherwise specified, the averaging time is based on the specified averaging time of the applicable test method.}

C.7. Emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted once during each federal fiscal year (Oct. 1 - Sept. 30) unless otherwise noted in specific conditions. Results shall be submitted to the Department within 45 days after testing. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Rule 62-297.310, F.A.C.]

Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions 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. [Rules 62-297.310(2) & (2)(b), F.A.C.]

C.8. Nitrogen Oxides. The test method for nitrogen oxides shall be EPA Method 7E, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

C.9. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

C.10. Volatile Organic Compounds. The test method for volatile organic compounds shall be EPA Method 25A, incorporated and adopted by reference in Chapter 62-297, F.A.C. VOC emissions limits will be assumed provided the CO allowable emission rate is achieved. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

C.11. Opacity. The test method for opacity shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

C.12. Sulfur Dioxide. The test method for SO_2 shall be EPA Method 6, incorporated and adopted by reference in Chapter 62-297, F.A.C. Compliance with the SO_2 emissions limit can be determined by calculations based on fuel analysis using ASTM D1072-80, D3031-81, D4084-82, D3246-81, D5504-98, or approved alternative method for sulfur content of gaseous fuels. [Rules 62-297.401, and 62-297.440 F.A.C.]

Other Requirements

C.13. 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 may 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.]

{Permitting Note: This emission unit is also subject to 40 CFR 63 Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines. See Facility-Wide Conditions for applicable requirements.}

Subsection D. This section addresses the following emissions unit

EU I.D.	Brief Description
008	Solar Mars Turbine Compressor Unit (FGT No. 1407)

Engine No. 1407 is a natural gas fired 13,000 BHP (ISO) Solar Mars 90 gas turbine. This engine incorporates dry low-NOx combustion technology to minimize exhaust NOx emissions. This engine was initially put in service in 2001 (permit 0390029-002-AC), and was modified in late 2001 (permit 0390029-003-AC).

Permit 0390029-002-AC, issued April 21, 2000, includes limits for NOx emissions of 25 ppmvd at 15% O_2 (equivalent emissions of 8.8 lbs/hr and 38.6 TPY ISO conditions), and CO of 50 ppmvd at 15% O_2. Sulfur content is limited to pipeline quality natural gas not exceeding 10 grains S per 100 scf, and VE was limited to 10% opacity.

Permit 0390029-003-AC, issued August 15, 2001, "up-rated" this turbine compressor from 10,350 BHP to 13,000 BHP with similar limits for NOx, CO, SO_2 and opacity. Equivalent NOx emissions increase to 10.2 lbs/hr and 44.68 tons/year. Engine No. 1404 was simultaneously modified to provide emissions offsets to avoid NSR/PSD review, resulting from the up-rating of this turbine compressor (FGT No. 1407) and construction of turbine compressor No. 1408. This turbine was tested on January 14, 2003 and determined to be in compliance with permit 0390029-003-AC at the "up-rated" capacity. Permit 00390039-009-AV is considered the initial Title V operation permit for this emissions unit at the "up-rated" capacity. Based on DARM's review/technical evaluation and FGT's October 14, 2004 request letter, component replacement language, designed to facilitate prompt gas turbine component repair and return to original specification service, has been incorporated into this emissions unit.

This emissions unit is subject to 40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines and 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines, adopted and incorporated by reference in Rule 62-204.800(11), F.A.C.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Capacity. The maximum heat input rate shall not exceed 112.8 MMBtu/hr while producing approximately 13,078 BHP based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1,040 Btu per scf for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. Performance data shall be adjusted for the appropriate site conditions in accordance with performance curves (Attachment 2) and/or equations on file with the Department. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and permit 0390029-003-AC]

{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

D.2. Authorized Fuel. This turbine compressor shall fire only pipeline quality natural gas with a maximum of 10 grains sulfur (S) per 100 standard cubic feet of natural gas. Compliance demonstration for the fuel sulfur limit shall be verified with a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel. [Rule 62-213.410, F.A.C., 40 CFR 60.334(h), and permit 0390029-003-AC]

D.3. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year. Except for startup and shutdown, operation below 50% base load is prohibited. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and permit 0390029-003-AC]

Emission Limitations and Standards

D.4. Emissions from the gas turbine shall not exceed the following limits:

POLLUTANT	Standards	Equivalent (lb/hr)	Equivalent (tons/year)
Nitrogen Oxides	25.0 ppmvd@15% O_2	10.2	44.68
Carbon Monoxide	50.0 ppmvd@15% O_2	12.4	54.31
Sulfur Dioxide	10 grains S/100 scf	3.1	13.58
Opacity	10% opacity - 6 min ave.	Not Applicable	Not Applicable
Particulate Matter	Good Combustion	0.7	3.3
Volatile Organic Compounds	Good Combustion	0.4	1.75

a. The CO standard is based on a 3-hour test average as determined by EPA Method 10.
b. The NOx standards is based a 3-hour test average 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_2 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 vendor data. 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 8,760 hours of operation per year. For comparison purposes, 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_2. Mass emission rates for SO_2 shall be calculated based on sulfur content and fuel flow rate. For tests conducted at 59° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.
g. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.
[Avoid Rule 62-212.400, F.A.C., and permits 0390029-002-AC, and 0390029-003-AC]

Test Requirements, Methods and Procedures

D.5. Emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of

compliance at the permitted maximum operating rate. Tests shall be conducted once during each federal fiscal year (October 1 to September 30) unless otherwise noted in specific conditions. CO and NOx performance testing shall be conducted concurrently at the permitted capacity. Results shall be submitted to the Department within 45 days after testing. For each run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), heat input (MMBtu per our), the power output (BHP), percent base load, and the inlet compressor temperature. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Rule 62-297.310, F.A.C.]

D.6. Testing shall be conducted at capacity. Capacity is defined as 90-100% of the maximum heat input allowed by this permit achievable for the average ambient temperature during the test. If it is impractical to test at capacity, the emissions unit may be tested at less than capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the permitted maximum heat input value and 110 percent of the value reached during the test. Once the emissions 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. Data, curves and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. The test reports shall comply with applicable portions of F.A.C. Rule 62-297.310, Test Reports. The attached operating curves (Attachment 1) showing NOx emissions as a function of inlet air temperature shall be used with the test results to demonstrate compliance. [Rules 62-297.310(2), and 62-4.070, F.A.C., 40 CFR 60.335(b), and permit 0390029-003-AC]

D.7. Nitrogen Oxides. The test method for nitrogen oxides shall be EPA Method 20, incorporated and adopted by reference in Chapter 62-297, F.A.C. NO_x 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. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

D.8. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10, incorporated and adopted by reference in Chapter 62-297, F.A.C. CO and NOx performance testing shall be conducted concurrently at the permitted capacity. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

D.9. Sulfur Dioxide. Emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. Compliance with the SO_2 emissions limit can be determined by calculations based on fuel analysis using ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86, or an approved alternative method. [Rules 62-297.401, 62-297.440, F.A.C., 40 CFR 60.334(h), and permit 0390029-003-AC]

D.10. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

{Permitting Note: Compliance verification for PM and VOC emissions are denoted in Specific Condition D.4's notes.}

Monitoring of Operations

D.11. Using the automated gas turbine control system, Permittee shall monitor and record heat input (MMBtu), power output (BHP), and hours of operation for the gas turbine. Within the 10 days of a request by the Department or the Compliance Authority, Permittee shall be able to summarize the following information for a given day: heat input (MMBtu per hour, daily average); power output (BHP, daily average); and total hours of gas turbine operation. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070, F.A.C., 40 CFR 60.332, and permit 0390029-003-AC]

Other Requirements

D.12. 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 may 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.]

D.13. Component Replacement. For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, 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 gas 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 gas turbine compressor engine remains subject to the standards of all valid air permits.
b. 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, 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. Permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. 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.

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

{Permitting Note: This emission unit is also subject to 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines. See Facility-Wide Conditions for applicable requirements.}

NSPS Conditions

D.14. Applicable portions of 40 CFR 60 Subpart A - General Provisions Requirements and Subpart GG - Standards of Performance for Stationary Gas Turbines, are incorporated and included by reference as conditions of this permit. This includes but is not limited to the following:

a. 40 CFR 60.7 - Notification and record keeping;
b. 40 CFR 60.8 - Performance tests;
c. 40 CFR 60.11 - Compliance with standards and maintenance requirements
d. 40 CFR 60.12 - Circumvention
e. 40 CFR 60.13 - Monitoring requirements
f. 40 CFR 60.14 - Modification
g. 40 CFR 60.17 - Incorporations by reference

[Rule 62-204.800, F.A.C., 40 CFR 60 Subpart A, and permit 0390029-002-AC]

Subsection E. This section addresses the following emissions unit

EU I.D.	Brief Description
010	Nuovo Pignone PGT10B Gas Turbine No. 1408

Engine No. 1408 is a natural gas fired 15,700 bhp Pignone model No. PGT-10B gas turbine. This engine incorporates dry low-NOx combustion technology to minimize exhaust NOx emissions.

Permit 0390029-003-AC, issued August 14, 2001, includes limits of 25 ppmvd at 15% O_2 for nitrogen oxides (equivalent emissions of 14.1 lbs/hr and 61.8 TPY ISO conditions), and 15, 30, and 75 ppmvd at 15% O_2 for carbon monoxide at 90 - 100% loading, 60 - 90% loading, and 50 - 60% loading, respectively. Sulfur content is limited to pipeline quality natural gas not exceeding 10 grains S per 100 scf, and VE is limited to 10% opacity. PM and VOC standards are identified as "Good combustion practices". Engine No. 1404 was modified to offset potential emission increases to avoid PSD/NSR review, which resulted from the "up-rating" of turbine compressor No. 1407 and construction of this turbine compressor (No. 1408). Permit 0030029-008-AC, issued on July 27, 2004, revised the CO emission rates and removed certain operating restrictions in the low and middle load ranges, which were required by permit 0030029-003-AC. The changes did not cause any increases in annual emissions of CO, although an incidental increase in VOC emissions may have occurred as a result (only) of the load limitation removal. Based on DARM's review/technical evaluation and FGT's October 14, 2004 request letter, component replacement language, designed to facilitate prompt gas turbine component repair and return to original specification service, has been incorporated into this emissions unit.

This emissions unit is subject to 40 CFR 60 Subpart GG - Standards of Performance for Stationary Gas Turbines and 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines, adopted and incorporated by reference in Rule 62-204.800(11), F.A.C.

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

E.1. Capacity. The maximum heat input rate shall not exceed 134.8 MMBtu/hr while producing approximately 15,700 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1,040 Btu per scf for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. Performance data shall be adjusted for the appropriate site conditions in accordance with performance curves (Attachment 2) and/or equations on file with the Department. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and permit 0390029-003-AC]

{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

E.2. Authorized Fuel. This turbine compressor shall fire only pipeline quality natural gas with a maximum of 10 grains sulfur (S) per 100 standard cubic feet of natural gas. Compliance

demonstration for the fuel sulfur limit shall be verified with a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel. [Rule 62-213.410, F.A.C., 40 CFR 60.334(h), and permit 0390029-003-AC]

E.3. Hours of Operation. The total hours of operation for this gas turbine are not limited (8,760 hours per year). Except for startup and shutdown, operation below 50% base load is prohibited. [Rules 62-4.160(2) and 62-210.200(243), F.A.C., and permits 0390029-003-AC, and 0390029-008-AC]

Emission Limitations and Standards

E.4. Emissions from the gas turbine shall not exceed the following limits:

POLLUTANT	Standards	Equivalent (lb/hr)	Equivalent (tons/year)
Nitrogen Oxides	25.0 ppmvd@15% O_2	14.1	61.76
Carbon Monoxide	21.0 ppmvd@15% O_2	8.67	37.97
Sulfur Dioxide	10 grains S/100 scf	3.7	16.21
Opacity	10% opacity - 6 min ave.	Not Applicable	Not Applicable
Particulate Matter	Good Combustion	0.9	3.94
Volatile Organic Compounds	Good Combustion	1.5	6.57

a. The CO standards are based on 3-hour test average as determined by EPA Method 10.
b. The NOx standards are based 3-hour test average 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_2 emissions. Expected fuel sulfur (S) 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 data in Table 3.1-2a in AP-42. Equivalent maximum VOC emissions are based on vendor data. Annual VOC emissions were based on the vendor data. No testing required.
f. Equivalent maximum hourly emissions are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, 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_2. Mass emission rates for SO_2 shall be calculated based on 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 8,760 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.
[Avoid Rule 62-212.400, F.A.C., and permits 0390029-003-AC, and 0390029-008-AC]

Test Requirements, Methods and Procedures

{Permitting Note: Unless otherwise specified, the averaging time for Emissions Limitations and Standards is based on the specified averaging time of the applicable test method.}

E.5. Emissions tests are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. Tests shall be conducted once during each federal fiscal year (October 1 to September 30) unless otherwise noted in specific conditions. CO and NOx performance testing shall be conducted concurrently at the permitted capacity. Results shall be submitted to the Department within 45 days after testing. For each run, the test report shall also indicate the natural gas firing rate (cubic feet per hour), heat input (MMBtu per hour), the power output (BHP), percent base load, and the inlet compressor temperature. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Rule 62-297.310, F.A.C.]

E.6. Testing shall be conducted at capacity. Capacity is defined as 90-100% of the maximum heat input allowed by this permit achievable for the average ambient temperature during the test. If it is impractical to test at capacity, the emissions unit may be tested at less than capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the permitted maximum heat input value and 110 percent of the value reached during the test. Once the emissions 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. Data, curves and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report. The test reports shall comply with applicable portions of F.A.C. Rule 62-297.310, Test Reports. The attached operating curve (Attachment 2) showing NOx emissions as a function of inlet air temperature shall be used with the test results to demonstrate compliance. [Rules 62-297.310(2), and 62-4.070, F.A.C., 40 CFR 60.335(b), and permits 0390029-003-AC, and 0030029-008-AC]

E.7. Nitrogen Oxides. The test method for nitrogen oxides shall be EPA Method 20, incorporated and adopted by reference in Chapter 62-297, F.A.C. 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. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

E.8. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10, incorporated and adopted by reference in Chapter 62-297, F.A.C. CO and NOx performance testing shall be conducted concurrently at capacity. [Rule 62-297.401, F.A.C., and permit 0390029-003-AC]

E.9. Sulfur Dioxide. Emissions shall be calculated based on fuel flow and vendor analysis of fuel sulfur content. Compliance with the SO_2 emissions limit can be determined by calculations based on fuel analysis using ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86, or an approved alternative method. [Rules 62-297.401 and 62-297.440 F.A.C., 40 CFR 60.334(h), and permit 0390029-003-AC]

E.10. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. [Rule 62-297.401, F.A.C.]

Monitoring of Operations

E.11. Using the automated gas turbine control system, Permittee shall monitor and record heat input (MMBtu), power output (bhp), and hours of operation for the gas turbine. Within the 10 days of a request by the Department or the Compliance Authority, Permittee shall be able to summarize the following information for a given day: heat input (MMBtu per hour, daily average); power output (bhp, daily average); and total hours of gas turbine operation. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070, F.A.C., and permits 0390029-003-AC, and 0390029-008-AC]

Other Requirements

E.12. 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 may 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.]

E.13. Component Replacement. For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, 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 gas 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 gas turbine compressor engine remains subject to the standards of all valid air permits.
b. 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, 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, Permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. Permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. 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.

{Permitting Note: This emission unit is also subject to 40 CFR 63 Subpart YYYY - NESHAP for Stationary Combustion Turbines. See Facility-Wide Conditions for applicable requirements.}

NSPS Conditions

E.14. Applicable portions of 40 CFR 60 Subpart A - General Provisions Requirements and Subpart GG - Standards of Performance for Stationary Gas Turbines, are incorporated and included by reference as conditions of this permit. This includes but is not limited to the following:

a. 40 CFR 60.7 - Notification and record keeping
b. 40 CFR 60.8 - Performance tests
c. 40 CFR 60.11 - Compliance with standards and maintenance requirements
d. 40 CFR 60.12 - Circumvention
e. 40 CFR 60.13 - Monitoring requirements
f. 40 CFR 60.14 - Modification
g. 40 CFR 60.17 - Incorporations by reference

[Rule 62-204.800, F.A.C., 40 CFR 60 Subpart A, and permit 0390029-003-AC]

Subsection F. This section addresses the following emissions unit

EU I.D.	Brief Description
011	Solar Titan 130-20502S Combustion Turbine No. 1409

Compressor Engine No. 1409 is a Solar Titan Model No. 130-20502S gas combustion turbine installed on December16, 2010. The combustion turbine fires approximately 151,800 cubic feet per hour of pipeline natural gas (SCC No 2-02-002-54) at maximum permitted capacity. At 165 MMBtu per hour of heat input, the combustion turbine produces approximately 20,500 bhp. After initial startup, the unit operates at or near capacity. Natural gas contains little or no ash, sulfur, or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide. The efficient combustion of natural gas at high temperatures results in lower emissions of carbon monoxide and volatile organic compounds. Lean premix combustion technology minimizes the formation of nitrogen oxides. When operating at capacity, exhaust gases exit a 55 feet tall stack that is 7.5 feet x 8 feet in diameter with a flow rate of approximately 232,782 acfm at 944° F.

Applicable Federal Regulations

F.1. 40 CFR 60 Subpart KKKK. The combustion turbine is subject to applicable requirements in NSPS Subparts A - General Provisions and KKKK - Stationary Combustion Turbines, of 40 CFR 60. (See Appendix 40CFR60 KKKK)

F.2. 40 CFR 63 Subpart YYYY. The combustion turbine is subject to applicable requirements in NESHAP Subparts A - General Provisions and YYYY - Stationary Combustion Turbines, of 40 CFR 63. However, Subpart YYYY has been stayed by EPA until further notice. (See Appendix 40CFR63 YYYY)

Essential Potential to Emit (PTE) Parameters

F.3. Permitted Capacity. The maximum allowable heat input rate to the combustion turbine is 165 MMBtu per hour while 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; and a higher heating value (hhv) of 1040 Btu/scf for natural gas. Heat input rates vary depending upon combustion turbine characteristics, load, and ambient conditions. 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.]

F.4. Authorized Fuel. The combustion turbine shall fire only natural gas with a maximum sulfur (S) content of 10 grains per 100 standard cubic feet of natural gas. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and 40 CFR 60 Subpart KKKK]

F.5. Restricted Operation. The hours of operation of the combustion turbine are not restricted (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.]

Emission Limitations and Standards

F.6. Emissions Standards. The combustion turbine shall not exceed the following standards for carbon monoxide (CO), nitrogen oxides (NO_X), opacity, particulate matter (PM), particulate matter with a mean aerodynamic diameter of 10 microns or less (PM_{10}), sulfur dioxide (SO_2), and

volatile organic compounds (VOC).

Pollutant	Emissions Standards [h]	Equivalent Maximum Emissions [i]		Rule Basis [j]
		lb/hour	TPY	
CO	25.0 ppmvd @ 15% oxygen [a]	9.0	39.4	Rule 62-212.400(12), F.A.C.
NO_X	15.0 ppmvd @ 15% oxygen [b]	8.9	38.9	Rule 62-212.400(12), F.A.C.
	25.0 ppmvd @ 15% oxygen [c]	---	---	40 CFR 60.4320
SO_2	10 grains of sulfur/100 scf [d]	4.5	19.9	Rule 62-212.400(12), F.A.C.
	0.060 lb SO_2/MMBtu [e]	---	---	40 CFR 60.4330
Opacity	10% opacity [f]	Not Applicable		Rule 62-4.070(3), F.A.C.
PM/PM_{10} [g]	None	1.09	4.76	---
VOC [g]	None	0.52	2.29	---

a. Compliance with the CO standards shall be demonstrated based on the average of three test runs conducted at permitted capacity as determined by EPA Method 10.
b. Compliance with the state NO_X standard shall be demonstrated based on the average of three test runs conducted at permitted capacity as determined by EPA Method 7E or 20.
c. Compliance with the federal NO_X standard shall be demonstrated as determined EPA Method 7E or 20 and the applicable requirements of 40 CFR 60.4400.
d. To reduce potential SO_2 emissions, 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. 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 potential SO_2 emissions to 0.027 lb/MMBtu, which is less than half of federal standard in 40 CFR 60.4330. Actual SO_2 levels are expected to be less than 0.0027 lb/MMBtu.
f. The opacity standard is based on a 6-minute average, as determined by EPA Method 9. The opacity standard serves as a surrogate standard to show efficient combustion.
g. Potential PM/PM_{10} and VOC emissions are minimized by the equipment specification of "lean premix combustion design". The CO standard serves as a surrogate standard to show efficient combustion. PM emissions are based on an AP-42 emission factor of 0.0066 lb/MMBtu (Table 3.1-2a) and all PM emissions are assumed to be PM_{10} emissions. VOC emissions are based on available vendor data of 25 ppmvd @ 15% oxygen of unburned hydrocarbons and the assumption that only 10% of these emissions are regulated VOC emissions. No testing or other compliance demonstration is required for PM/PM_{10} and VOC emissions.
h. Permittee shall demonstrate compliance with these standards.
i. The equivalent maximum emissions are provided for informational purposes and are based on: the permitted capacity; a compressor inlet air temperature of 59° F; a compressor inlet pressure of 1 atmosphere; full operation (8760 hours per year); and the permit standards (CO, NO_X, and SO_2) or the maximum expected emissions (PM/PM_{10} and VOC). Each test report shall identify the measured mass emission rates for CO and NO_X. The report shall estimate the SO_2 mass emission rate based on the current typical fuel sulfur content and actual natural gas firing rate.
j. The CO, NO_X and SO_2 emissions standards of this permit ensure that the project is not subject to PSD preconstruction review in accordance with Rule 62-212.400(PSD), F.A.C.

[Rules 62-4.070(3) and 62-212.400(12), F.A.C., 40 CFR 60.4320, and 40 CFR 60.4330, and permit 0390029-011-AC]

Test Requirements, Methods and Procedures

F.7. Annual Compliance Tests. During each federal fiscal year (October 1 - September 30), the combustion turbine shall be tested to demonstrate compliance with the emission standards for CO, NO_X, and visible emissions. If the turbine's NOx emissions exceed 75% of the applicable NSPS NO_X standard on the previous performance test, the subsequent compliance test shall be conducted no more than 14 calendar months following the previous performance test. CO and NO_X emissions shall be tested concurrently at permitted capacity. Actual SO_2 emissions shall be reported based on the current typical fuel sulfur content and actual natural gas firing rate for each test run. [Rules 62-4.070(3), and 62-297.310(7)(a)4, F.A.C., and 40 CFR 60.4400]

F.8. Test Requirements. Permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance test and at least 15 days prior to any other required test. 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. Tests shall be conducted in accordance with the applicable requirements specified in this permit and 40 CFR 60 Subpart KKKK as applicable. [Rule 62-297.310(7)(a)9, F.A.C., and 40 CFR 60.7, 60.8, and 60.4400]

F.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 (These methods shall be conducted as necessary to support the other test methods.)
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources (This 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 Combustion Turbines

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, and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

Monitoring of Operations

F.10. Test Reports. Permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in 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. [Rule 62-297.310(8), F.A.C., and 40 CFR 60.8]

F.11. Operational Data. Using the automated combustion turbine control system, Permittee shall monitor and record heat input (MMBtu), power output (bhp) and hours of operation for the combustion turbine. Operational information shall be summarized and reported with the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

F.12. Component Replacements. For the replacement of combustion turbine components to facilitate prompt repair and return the unit to its original specifications, 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(169), F.A.C.]
b. 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, 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, Permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. 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. 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.

Subsection G. This section addresses the following emissions unit

EU I.D.	Brief Description
012	Emergency Generators FGTC GEN04 and FGTC GEN05

EU 012, Two-Generac Model No. SG300 (or equivalents) emergency generators, FGTC GEN04 and FGTC GEN05, are each powered by 454 bhp reciprocating internal combustion engines firing pipeline natural gas. The engines are 4-stroke, rich burn, spark-ignition engines. The engines coupled with the generators utilize a non-selective catalytic reduction or 3-way catalyst as primary control technology.

Applicable Federal Regulations

G.1. NSPS Subpart JJJJ. The Two-Generac Model No. SG300 (or equivalents) emergency generators, FGTC GEN04 and FGTC GEN05 (EU 012), are subject to applicable requirements in NSPS Subparts A (General Provisions) and JJJJ (Stationary Spark Internal Combustion Engines) of 40 CFR 60. See Appendix E. [Rules 62-210.300(a)(35)g., and 62-204.800(8)(b)80, F.A.C.]

{Permitting note: The emergency generator 454 Hp engines were manufactured after January 1, 2010 and are subject to emissions limits of (40 CFR 60 Subpart JJJJ) 40 CFR 60.4233, operation and maintenance requirements of 40 CFR 60.4243, and recordkeeping requirements of 40 CFR 60.4243(a)(1) and 60.4245(a)(1), (2) & (3). However, the engines are certified and thus exempt from annual testing by 40 CFR 60 60.4243(a)(1) if operated and maintained according to the manufacturer's emissions-related written instructions.}

G.2. NESHAP Subpart ZZZZ. The emergency generators are subject to applicable requirements in NESHAP Subparts A and ZZZZ (Reciprocating Internal Combustion Engines). Pursuant to 40 CFR 63.6590(c) for stationary reciprocating internal combustion engines (RICE) also subject to regulations under 40 CFR 60, a 4-stroke rich burn stationary RICE with a site rating of less than or equal to 500 bhp must meet the requirements of this part by meeting the requirements of 40 CFR 60 subpart JJJJ for spark ignition engines. No further requirements apply for such engines under this part. [Rules 62-210.300(a)(35)h., and 62-204.800(10)(b)82, F.A.C.]

Essential Potential to Emit (PTE) Parameters

G.3. Methods of Operation

a. The owner or operator of the emergency generator engines shall operate and maintain the engines and control devices according to the manufacturer's emission-related written instructions. [40 CFR 60.4243(a)(1)]
b. If the certified engine and control device are not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and owners or operators of the noncertified engine must to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions and must conduct an initial performance test within 1 year of engine startup to demonstrate compliance, but a subsequent test is not required unless the engine is rebuilt or undergoes major repair or maintenance. [40 CFR 60.4243(a)(2)(ii) and (f)]

G.4. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [40 CFR 60.4243(d)].

G.5. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233. [40 CFR 60.4243(e)].

Emission Limitations and Standards

G.6. The Two Generac Model No. SG300emergency generator engines shall each meet the emissions standards of 40 CFR 60.4233(e), Table 1, excerpted below.

EXERPT FROM TABLE 1 TO SUBPART JJJJ OF PART 60 - NOX, CO, AND VOC EMISSION STANDARDS FOR STATIONARY EMERGENCY ENGINES >25 HP								
Engine type and fuel	Maximum engine power	Manufacture date	Emission standards					
			g/HP-hr			ppmvd at 15% O2		
			NOX	CO	VOC	NOX	CO	VOC
Emergency	HP>130	1/1/2009	2.0	4.0	1.0	160	540	86
For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.								

Test Requirements, Methods and Procedures

G.7. No performance testing of the emergency generator engines is required if the engines are certified by the manufacturer and the engines and control devices are operated and maintained according to the manufacturer's emission-related written instructions. [40 CFR 60.4243(a)(1)].

Monitoring of Operations

G.8. The owner or operator of the emergency generator engines shall keep records of conducted maintenance to demonstrate compliance with operation and maintenance requirements of 40 CFR 60.4243(a)(1).

G.9. Owners and operators of all stationary SI ICE must keep records of the following information:

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
(2) Maintenance conducted on the engine.
(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR 90, 1048, 1054, and 1060, as applicable.

[40 CFR 60.4245(a)(1), (2) & (3)]

Subsection H. This section addresses the following emissions unit

EU I.D.	**Brief Description**
009	Emergency Generator FGTC GEN03 & Miscellaneous Equipment

EU 009, Miscellaneous Support Equipment includes fugitive emissions, lube oil storage tanks, existing FGTC GEN03 (637 bhp), and one 500 gallon oily water tank.
The 500 gallon oily water tank is authorized by permit 0390029-011-AC.

{Permitting Note: the engine of Emergency Generator FGTC GEN03 is not currently subject to NSPS or NESHAP requirements, but its NOx emissions must be included in the emissions reporting required by Rule 62-212.300(1)(e) F.A.C.}