Florida Gas Transmission Company
Compressor Station No. 14

Facility ID No. 0390029
Gadsden County

Title V Air Operation Permit Renewal

Permit No. 0390029-015-AV
(Renewal of Title V Air Operation Permit No. 0390029-010-AV)

Permitting and Compliance Authority:

State of Florida
Department of Environmental Protection
Air Resource Management, Northwest District

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Title V Air Operation Permit Renewal

Permit No. 0390029-015-AV

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PROPOSED PERMIT

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

Permit No: 0390029-015-AV
Gadsden Compressor Station No. 14
Facility ID No.: 0390029
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Gadsden Compressor Station No. 14 is located in Gadsden County at 3690 Hosford Highway, Quincy, Florida. UTM Coordinates are: Zone 16, 719.97 km East and 3377.39 km North; and, Latitude: 30° 30' 38" North and Longitude: 84° 42' 28" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date:
Renewal Application Due Date: Exp. DATE -225
Expiration Date: Eff. DATE + 5 years

(PROPOSED)

_____

J. Charles Harp
Program Administrator
Waste Management/Air Resources
Northwest District

JCH/aj/c

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 [Florida Gas Transmission (FGT) Engines Nos. 1401, 1402, 1403 and 1405] are 4-stroke, lean burn, spark-ignition 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. These natural gas-fired engines are subject to 40 CFR 63 Subpart ZZZZ. However, pursuant to 40 CFR 63.6590(b)(3)(ii), existing 4SLB engines with a site rating greater than 500 Hp located at major HAP sources do not have to meet the requirements of 40 CFR 63, Subparts A or ZZZZ, and are not required to submit an initial notification. Accordingly, these engines have no applicable federal requirements at this time.

Emissions Unit 004 (FGT Engine No. 1404) is a 4-stroke, lean burn, spark-ignition 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. Emissions Unit 006 (FGT Engine No. 1406) is a 4-stroke, lean burn, spark-ignition 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. 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. 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.

Emissions Unit 011 (FGT Engine No.1409) consists of 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 at maximum permitted capacity. At 165 MMBtu per hour of heat input, the combustion turbine produces approximately 20,500 bhp. Emissions Unit 012 (Emergency Generators GEN04 and FGTC GEN05) consists of Two-Generac Model No. SG300 (or equivalents) emergency generators, FGTC GEN04 and FGTC GEN05, each powered by 454 BHp 4-stroke, lean burn, spark-ignition reciprocating internal combustion engines firing pipeline natural gas. The engines coupled with the generators utilize a non-selective catalytic reduction or 3-way catalyst as primary control technology. Emissions Units 011 and 012 were added under construction permit 0330029-011-AC along with one 500 gallon oily water tank (Emissions Unit 009).

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. The 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. Emissions Unit 012, the two 454 Hp engines for the 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 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.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
001-003 & 005	Reciprocating Internal Combustion Engine No. 1401, 1402, 1403, 1405
004	Reciprocating Internal Combustion Engine No. 1401
006	Reciprocating Internal Combustion Engine No. 1401
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

Subsection C. Applicable Regulations.

Based on the renewal application received November 9, 2012, this facility is a major source of hazardous air pollutants (HAP). Because this facility operates stationary reciprocating internal combustion engines, it is subject to regulation under 40 CFR 63, Subpart ZZZZ, - National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines. However, since the engines meet the Subpart ZZZZ definition of "existing units", there are no unit specific applicable requirements that must be met pursuant to this rule at this time. The existing facility is a PSD major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 60, Subpart A, NSPS General Provisions	008, 010, 011, 012
40 CFR 60, Subpart GG	008, 010
40 CFR 60, Subpart JJJJ	012
40 CFR 60, Subpart KKKK	011
40 CFR 63, Subpart YYYY	008, 010, 011
40 CFR 63, Subpart ZZZZ	001-006, 012
Rule 62-212.400	Facility
Rule 62-213	Facility
Rule 62-210	Facility
Rule 62-296	Facility
Rule 62-297	Facility
Rule 62-204	Facility
Rule 62-4	Facility

The following conditions apply facility-wide to all emissions units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

Emissions and Controls

FW2. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

{Permitting Note: Nothing is deemed necessary and ordered at this time.}

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. *This facility has no emissions of unconfined particulate matter*. [Rule 62-296.320(4)(c), F.A.C.; and permit 0390029-003-AC]

Annual Reports and Fees

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW6. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. A copy of the form and instructions may be obtained electronically at http://www.dep.state.fl.us/air/rules/forms/aor.htm. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office. [Rule 62-210.370(3), F.A.C.]

FW7. Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Rule 62-213.205, F.A.C.]

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

FW9. 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.]

FW10. Actual Emissions Reporting. Permit No. 0390029-012-AC was 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.

Based on Permit No. 0390029-012-AC, the Department required 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

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

Subsection A. Unregulated Emissions Unit 001-003 & 005

The specific conditions in this section apply to the following emissions units:

EU No.	Brief Description
001	Reciprocating Internal Combustion Engine No. 1401
002	Reciprocating Internal Combustion Engine No. 1402
003	Reciprocating Internal Combustion Engine No. 1403
005	Reciprocating Internal Combustion Engine No. 1405

These engines are natural gas fired 4-stroke, lean burn, spark-ignition reciprocating internal combustion engines manufactured by Worthington (Model SEHG-8). Engines Nos. 1401-1403 were installed in 1958 and IC engine 1405 was installed in 1968. These natural gas-fired engines are subject to 40 CFR 63 Subpart ZZZZ. However, pursuant to 40 CFR 63.6590(b)(3)(ii), existing 4SLB engines with a site rating greater than 500 Hp located at major HAP sources do not have to meet the requirements of 40 CFR 63, Subparts A or ZZZZ, and are not required to submit an initial notification. Accordingly, these engines have no applicable requirements.

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). 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) 62-4.070(3) and 62-210.200(PTE), 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. These emissions units are allowed to operate continuously, i.e., 8,760 hours per year. [Rules 62-4.160(2) and 62-210.200(243), F.A.C.]

Recordkeeping and Reporting Requirements

A.3. Records of Heat Input. Rolling 12-month totals shall be maintained and made available on site for a minimum of five years for Department inspection. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C]

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
004	Internal Combustion Engine No. 1404

This engine is a natural gas fired 4-stroke, lean burn, spark-ignition reciprocating IC engine manufactured by Worthington (Model SEHG-8) and installed in 1966, and 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 (10 grains 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. However, based on rule 63.6590(b)(3) the unit does not have to meet the requirements of the Subpart ZZZZ 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 engines may result in the unit becoming subject to Federal rules.

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum allowable heat input rate shall not exceed 16.5 MMBtu/hr, averaged monthly, while producing approximately 2,000 BHP, based on a higher heating value (HHV) of 1,040 BTU/hr SCF for natural gas. [Rules 62-4.160(2), 62-210.200(PTE), F.A.C.; and Permit No. 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 110% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

B.2. Methods of Operation (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 and 62-213.440, F.A.C.; Permit No. 0390029-003-AC.]

B.3. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C., Permit No. 0390029-003-AC]

B.4. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

Unless otherwise specified, the averaging times are based on the averaging time of the applicable test method.

B.5. Emissions Standards. Emissions from this modified reciprocating compressor engine shall not exceed the following limits:

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

a. The NOx standard is based on a 3-hour test average as determined EPA Method 7E.
b. The CO standard is based on a 3-hour test average as determined by EPA Method 10.
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.; Permit No. 0390029-003-AC]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.

B.6. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that 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. [Rule 62-210.700(1), F.A.C.; Permit No. 0390029-003-AC]

B.7. Excess Emissions Prohibited. 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. [Rule 62-210.700(2), F.A.C.; Permit No. 0390029-003-AC]

B.8. Excess Emissions Notification. 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. [Rule 62-210.700(4), F.A.C.; Permit No. 0390029-003-AC].

Test Methods and Procedures

B.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

Method	Description of Method and Comments
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 {Note: The method shall be based on a continuous sampling train.}

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C.; Permit No. 0390029-003-AC]

B.10. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. 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). [Rule 62-297.310, F.A.C., and Permit No. 0390029-003-AC]

B.11. Annual Compliance Tests Required. During each federal fiscal year (October 1 to September 30), EU 004 shall be tested to demonstrate compliance with the emissions standards for NOx and VE. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rule 62-297.310(7), F.A.C.; Permit No. 0390029-003-AC]

B.12. Compliance Tests Prior To Renewal. Compliance tests shall be performed for CO, once every five years, (within 12 months prior to the expiration of this permit and shall be performed concurrently with NOx testing). The tests shall occur prior to obtaining a renewed operating permit to demonstrate compliance with the emission limits. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rules 62-210.300(2)(a), 62-297.310(7)(a), F.A.C.; Permit No. 0390029-003-AC]

B.13. 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.; Permit No. 0390029-003-AC]

B.14. PM and VOC. PM and VOC emissions are minimized by good combustion practices. Efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Testing is not required for PM and VOC. [Rule 62-297.401, F.A.C.; Permit No. 0390029-003-AC]

Recordkeeping and Reporting Requirements

B.15. Fuel Consumption Reporting. Permittee shall adequately monitor the fuel consumption rate and hours of operation for use in submittal of the required Annual Operating Report (AOR). Records shall be kept of monthly hours of operation and natural gas consumption and shall be used to determine average hourly fuel 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 62-4.070(3), F.A.C.; Permit No. 0390029-003-AC]

B.16. Engine Analysis. During each complete engine analysis performed according to the facility Standard Operating Procedure (SOP); a trained technician shall adjust engine performance as necessary. Engine operation shall not exceed 1,440 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.; Permit No. 0390029-003-AC].

B.17. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Subsection C. The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
006	Internal Combustion Engine No. 1406

Engine No. 1406 is a natural gas fired 4-stroke, lean burn, spark-ignition reciprocating IC engines manufactured by Cooper-Bessemer (model GMVHR-12C) and was placed in service in 1991. This spark ignition 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 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. However, based on rule 63.6590(b)(3), the unit does not have to meet the requirements of the Subpart ZZZZ or Subpart A. In addition, no initial notification is required. Any future reconstruction (defined in 40 CFR 63.2) or installation of new engines may result in the unit becoming subject to Federal rules.

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. The maximum allowable operating rate (rated capacity) is 21.69 MMBtu/hr while producing approximately 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]

{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 110% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

C.2. Methods of Operation (Fuels). The maximum natural gas consumption shall not exceed 20,856 scf per hour, averaged monthly. [Rule 62-210.200(243), F.A.C.; Permit No. 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.}

C.3. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.200(243), F.A.C.; Permit No. AC20-189438, issued May 9, 1991]

Emission Limitations and Standards

Unless otherwise specified, the averaging times are based on the averaging time of the applicable test method.

C.4. Emissions Limitations. The permitted maximum allowable emissions rate for each pollutant is 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

[Permit AC20-189438 (PSD-FL-159) and Permit No. 0390029-006-AC]

Excess Emissions

Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS, NESHAP or Acid Rain program provision.

C.5. Excess Emissions Allowed. Excess emissions resulting from malfunction shall be permitted provided that 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. [Rule 62-210.700(1), F.A.C.; Permit No. 0390029-003-AC]

C.6. Excess Emissions Prohibited. 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. [Rule 62-210.700(2), F.A.C.; Permit No. 0390029-003-AC]

C.7. Excess Emissions Notification. 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 [Rule 62-210.700(4), F.A.C.; Permit No. 0390029-003-AC].

Test Methods and Procedures

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
6	Determination of Sulfur Dioxide Emissions from Stationary Sources
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 {Note: The method shall be based on a continuous sampling train.}
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C., and Permit No. 0390029-003-AC]

C.9. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

C.10. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), EU 006 shall be tested to demonstrate compliance with the emissions standards for NOx, CO and VE. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rule 62-297.310(7), F.A.C.; Permit No. 0390029-003-AC]

C.11. Sulfur Dioxide. 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.]

C.12. Volatile Organic Compounds. VOC emissions limits will be assumed provided the CO allowable emission rate is achieved. [Rule 62-297.401, F.A.C.; Permit No. 0390029-003-AC]

C.13. Particulate Matter. PM emissions are minimized by good combustion design with exclusive firing of natural gas. Efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Testing is not required for PM. [Rule 62-297.401, F.A.C.; Permits Nos. AC20-189438 (PSD-FL-159) and 0390029-006-AC]

Recordkeeping and Reporting Requirements

C.14. Fuel Consumption Reporting. 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.; Permit No. AC20-189438, issued May 9, 1991 and modified September 17, 1993]

C.15. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Subsection D. Emissions Unit 008 (Solar Mars Turbine Compressor Unit FGT No. 1407)

The specific conditions in this section apply to the following emissions unit:

EU No.	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 0390029-009-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.

Essential Potential to Emit (PTE) Parameters

D.1. Permitted Capacity. The maximum allowable 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. [Rules 62-4.160(2), and 62-210.200(243), F.A.C.; Permit No. 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 110% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability}

D.2. Methods of Operation (Fuels). 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 No. 0390029-003-AC]

D.3. Methods of Operation (Load). 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.]

D.4. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.200(243), F.A.C.]

D.5. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

D.6. Emissions Standards. Emissions from the gas turbine shall not exceed the following limits:

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

*Note: These emissions standards are at 100% load and ISO conditions.

a. The NOx standard is based on a 3-hour test average as determined EPA Method 7E or 20.
b. The CO standard is based on a 3-hour test average as determined by EPA Method 10.
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.; Permit Nos. 0390029-002-AC, and 0390029-003-AC]

Monitoring of Operations

D.7. 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 No. 0390029-003-AC]

Test Methods and Procedures

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	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 {Note: The method shall be based on a continuous sampling train.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C., Permit No. 0390029-003-AC]

D.9. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

D.10. Annual Compliance Tests Required. During each federal fiscal year (October 1 to September 30), EU 008 shall be tested to demonstrate compliance with the emissions standards for NOx, CO and VE. CO and NOx performance testing shall be conducted concurrently at the permitted capacity. [Rule 62-297.401, F.A.C., and Permit No. 0390029-003-AC]

D.11. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rule 62-297.310(7), F.A.C.; Permit No. 0390029-003-AC]

D.12. Additional Compliance Test Requirements. 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. 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 No. 0390029-003-AC]

D.13. Nitrogen Oxides. Since the NOx emission limit specified in Specific Condition: Emissions Standards for NOx is more stringent than the applicable limit in NSPS Subpart GG, compliance with NOx limit in Specific Condition: Emissions Standards for NOx also demonstrates compliance with the NSPS Subpart GG limit. [Rule 62-297.401, F.A.C., and Permit No. 0390029-003-AC]

D.14. 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 No. 0390029-003-AC]

D.15. PM and VOC. PM emissions are minimized by good combustion design with exclusive firing of natural gas. Efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Testing is not required for PM and VOC. [Permits Nos. 0390029-002-AC and 0390029-003-AC]

Other Requirements

D.16. 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.

[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.17. 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(8)b.40, F.A.C., 40 CFR 60 Subpart A, and Permit No. 0390029-002-AC]

Subsection E. Emissions Unit 010 (Nuovo Pignone PGT10B Gas Turbine No. 1408)

The specific conditions in this section apply to the following emissions unit:

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

Engine No. 1408 is a natural gas fired 15,700 bhp Pignone model No. GE-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.

Essential Potential to Emit (PTE) Parameters

E.1. Permitted Capacity. The maximum allowable 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. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and Permit No. 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 110% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability}

E.2. Methods of Operation (Fuels). 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 No. 0390029-003-AC]

E.3. Methods of Operation (Load). Except for startup and shutdown, operation below 50% base load is prohibited. [Rules 62-4.160(2), and 62-210.200(PTE), F.A.C., and Permits Nos. 0390029-003-AC and 0390029-008-AC]

E.4. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.200(PTE), F.A.C., and Permits Nos. 0390029-003-AC and 0390029-008-AC]

E.5. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

E.6. Emissions Standards. Emissions from the gas turbine shall not exceed the following limits:

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

*Note: These emissions standards are at 100% load and ISO conditions.

a. The NOx standard is based on a 3-hour test average as determined EPA Method 7E or 20.
b. The CO standard is based on a 3-hour test average as determined by EPA Method 10.
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 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.; Permits No. 0390029-003-AC, and 0390029-008-AC]

Monitoring of Operations

E.7. 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.; Permits No. 0390029-003-AC, and 0390029-008-AC]

Test Methods and Procedures

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	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 {Note: The method shall be based on a continuous sampling train.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C.; Permit No. 0390029-003-AC]

E.9. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. 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). [Rule 62-297.310, F.A.C.; Permits No. 0390029-003-AC and 0390029-008-AC]

E.10. Annual Compliance Tests Required. During each federal fiscal year (October 1st to September 30th), EU 010 shall be tested to demonstrate compliance with the emissions standards for NOx, CO and VE. CO and NOx performance testing shall be conducted concurrently at capacity. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rule 62-297.310(7), F.A.C.; Permit No. 0390029-003-AC]

E.11. Additional Compliance Tests Required. 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. 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 No. 0390029-003-AC and 0030029-008-AC]

E.12. Nitrogen Oxides. Since the NOx emission limit specified in Specific Condition: Emissions Standards for NOx is more stringent than the applicable limit in NSPS Subpart GG, compliance with NOx limit in Specific Condition Emissions Standards for NOx also demonstrates compliance with the NSPS Subpart GG limit. [Rule 62-297.401, F.A.C., Permit No. 0390029-003-AC]

E.13. 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 No. 0390029-003-AC]

E.14. PM and VOC. PM emissions are minimized by good combustion design with exclusive firing of natural gas. Efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Testing is not required for PM and VOC. [Permits Nos. 0390029-002-AC and 0390029-003-AC]

Other Requirements

E.15. 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.]

{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.16. 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(8)b.40, F.A.C., 40 CFR 60 Subpart A, and permit 0390029-003-AC]

The specific conditions in this section apply to the following emissions unit:

EU No.	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. The combustion turbine is subject to applicable requirements in 40 CFR 60 KKKK - Stationary Combustion Turbines and 40 CFR 63Subpart YYYY. However, Subpart YYYY has been stayed by EPA until further notice.

Essential Potential to Emit (PTE) Parameters

F.1. 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. [Rules 62-4.160(2), and 62-210.200(243), F.A.C., and Permit No. 0390029-003-AC]

F.2. Methods of Operation (Fuels). 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. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; and 40 CFR 60 Subpart KKKK]

F.3. Methods of Operation (Load). Except for startup and shutdown, operation below 50% base load is prohibited. [Rules 62-4.160(2), and 62-210.200(PTE), F.A.C.]

F.4. Hours of Operation. This emissions unit may operate continuously (8,760 hours/year). [Rules 62-4.160(2), and 62-210.200(PTE), F.A.C.]

F.5. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), 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 (lb/hr)[i]	Equivalent (tons/year)[i]
Nitrogen Oxides	15.0 ppmvd@15% oxygen[a]	8.9	38.9
	25.0 ppmvd @ 15% oxygen[b]		
Carbon Monoxide	15.0 ppmvd@15% oxygen[c]	9.0	39.4
Sulfur Dioxide	10 grains of sulfur/100 scf[d]	4.5	19.9
	0.060 lb SO_2/MMBtu[e]		

POLLUTANT	Emissions Standards[h]	Equivalent (lb/hr)[i]	Equivalent (tons/year)[i]
Opacity	10% opacity[f]		
PM/PM_{10}[g]	None	1.09	4.76
VOC[g]	None	0.52	2.29

The NO_X,, CO 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.

a. 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.
b. 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.
c. 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.
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.

[Rules 62-4.070(3) and 62-212.400(12), F.A.C., 40 CFR 60.4320, and 40 CFR 60.4330, and Permit No. 0390029-011-AC]

Monitoring of Operations

F.7. 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, F.A.C.]

Test Methods and Procedures

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	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 {Note: The method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-297.401, F.A.C., Permit No. 0390029-003-AC]

F.9. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit, and specified in NSPS Subpart KKKK as applicable. 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.10. Annual Compliance Tests Required. During each federal fiscal year (October 1 to September 30), EU 011 shall be tested to demonstrate compliance with the emissions standards for VE, CO and NOx. 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. Notification of compliance testing and completed test reports may be submitted by electronic mail to nwdair@dep.state.fl.us. [Rules 62-4.070(3), and 62-297.310(7)(a)4, F.A.C., and 40 CFR 60.4400]

Other Requirements

F.11. 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.]

F.12. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Applicable Federal Regulations

F.13. NSPS 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.

F.14. NESHAP 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. [40 CFR 63.6095(d)]

Subsection G. This section addresses the following emissions unit.

EU No.	Emission Unit 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 4-stroke, lean burn, spark-ignition reciprocating internal combustion engines firing pipeline natural gas.

The emergency generator engines are subject to applicable requirements in NESHAP Subparts A and ZZZZ. According to 40 CFR 63 subpart ZZZZ {63.6590(c)}, new 4SLB engines with a site rating equal to or less than 500 hp, located at a major source, must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ. No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ. The emergency generator engines are subject to applicable requirements in NSPS Subparts A (General Provisions) and JJJJ (Stationary Spark Internal Combustion Engines) of 40 CFR 60, because the emergency generator engines are certified engines that were manufactured after January 1, 2009, and they must comply with the emission standards in Table 1 to 40 CFR 60 subpart JJJJ for emergency engines greater than 130 hp. This emission unit qualifies as an insignificant emission unit pursuant to Rule 62-210.300(3)(a)(35), F.A.C., however, it is included in this permit as a regulated emission unit because it is subject to 40 CFR 60, Subpart JJJJ.

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

Essential Potential to Emit (PTE) Parameters

G.1. Methods of Operation - (i.e., Fuels). The 454 hp emergency generator engines shall be fired exclusively with pipeline natural gas, with the exception of using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but records must be kept of such use. [40 CFR 60.4243(e), Rule 62-213.440, F.A.C.; and Permit No. 0390029-012-AC]

G.2. 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.3. Hours of Operation. 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) and Rule 62-210.200(PTE), F.A.C.]

G.4. 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.5. Emissions Standards. 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.								

[40 CFR 60.4243(a)(1) and Table 1 to NSPS subpart JJJJ]

Testing Requirements

G.6. 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.7. 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).

Recordkeeping and Reporting Requirements

G.8. The following records must be kept for the two 454 hp emergency generator engines:

a. All notifications submitted to comply with this subpart and all documentation supporting any notification.

b. Keep a maintenance plan and records of maintenance conducted on the engine.

c. 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)]

Applicable Federal Regulations

G.9. NSPS Subpart JJJJ. The emergency generator engines are subject to applicable requirements in NSPS Subparts A (General Provisions) and JJJJ (Stationary Spark Internal Combustion Engines) of 40 CFR 60. The engines are certified engines that were manufactured after January 1, 2009 and must comply with the emission standards in Table 1 to 40 CFR 60 subpart JJJJ for emergency engines greater than 130 hp. [Rules 62-210.300(a)(35)g., and 62-204.800(8)(b)80, F.A.C.]

G.10. 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, lean 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 40 CFR 63 Subpart ZZZZ. [Rules 62-210.300(a)(35)h., and 62-204.800(10)(b)82, F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection H. This section addresses the following emissions unit

EU No.	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 spark ignition 4stroke lean burn engine and one 500 gallon oily water tank.

The 500 gallon oily water tank is authorized by permit 0390029-011-AC

The engine of the 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.

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix ICE, Requirements for Internal Combustion Engines.
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart GG - Standards of Performance for Stationary Gas Turbines.
Appendix NSPS, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines.
Appendix NSPS, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, Subpart ZZZZ - Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.