Florida Gas Transmission Company, LLC
Compressor Station No. 18

Facility ID No. 0950190
Orange County

Title V Air Operation Permit Revision and Renewal

Permit No. 0950190-013-AV
(Revision and Renewal of Title V Air Operation Permit No. 0950190-010-AV)

Permitting Authority:

State of Florida
Orange County Environmental Protection Division
3165 McCrory Place, Suite 200
Orlando, FL 32803

Telephone: (407) 836-1400
Email: AirPermitsOrangeCounty@ocfl.net

Compliance Authority:

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3165 McCrory Place, Suite 200
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Title V Air Operation Permit Revision and Renewal

Permit No. 0950190-013-AV

Table of Contents

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7990 Steer Lake Road
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Permit No. 0950190-013-AV
Compressor Station No. 18
Facility ID No. 0950190
Title V Air Operation Permit
Revision and Renewal

The purpose of this permit is to revise and renew Title V air operation permit for the above referenced facility. The existing Compressor Station No. 18 is located in Orange County at 7990 Steer Lake Road, Orlando. UTM Coordinates are: Zone 17, 452.06 km East and 3155.02 km North. Latitude is: 28° 31' 15.6968" North; and, Longitude is: 81° 29' 23.9234 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, and 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

0950190-010-AV Effective Date: August 18, 2020
0950190-011-AV Effective Date: June 20, 2023
0950190-012-AC Effective Date: April 22, 2025
0950190-013-AV Effective Date: June 24, 2025
Renewal Application Due Date: November 11, 2029
Expiration Date: June 24, 2030

(Proposed)

Wanda Y. Parker, CEP
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Air Quality Management
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(6) RNC/SJA/WYP/kw

Subsection A. Facility Description.

This facility is a natural gas pipeline compressor station. It is part of a natural gas pipeline system serving the state of Florida. Six engines of various types drive compressors to maintain pressure and flow of natural gas in the pipeline. Engines 1801, 1802, 1803 and 1804 are 4 stroke lean burn reciprocating internal combustion engines (4SLB RICE). Engine 1805 is a 2 stroke lean burn (2SLB) RICE. All five of these engines are subject to 40 CFR Part 63 Subpart ZZZZ as affected units, but none must meet the requirements of the subpart (See 40 CFR Part 63 Subpart ZZZZ, Section 63.6590(b)(3)). Engine 1806 is a gas turbine with a dry low NO_x combustion system; it is subject to 40 CFR Part 60 Subpart GG. There is no external pollution control equipment on these engines. The facility also has two RICE emergency generators. All engines at this facility use pipeline natural gas as the only fuel.

Based on the Title V Air Operation Permit Revision/Renewal application received January 8, 2025, this facility is a Title V major source of total hazardous air pollutants (Toal HAPs), carbon monoxide (CO) and Prevention of Significant Deterioration (PSD) major source of nitrogen oxides (NO_x).

Also included in this permit are miscellaneous unregulated and insignificant emissions units and activities (see Appendix I, List of Insignificant Emissions Units and/or Activities and Appendix U, List of Unregulated Emissions Units and/or Activities.).

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
005	Engine 1805 – 2,700 bhp RICE (2SLB).
006	Engine 1806 – 7,200 bhp Gas Turbine.
008	Engine ~~1808~~ 1832 – 306 bhp Emergency Generator RICE.
Unregulated Emissions Units and Activities (see Appendix U, List of Unregulated Emissions Units)	
001	Engine 1801 – 2000 bhp RICE (4SLB).
002	Engine 1802 – 2000 bhp RICE (4SLB).
003	Engine 1803 – 2000 bhp RICE (4SLB).
004	Engine 1804 – 2000 bhp RICE (4SLB).
007	Engine ~~1807~~ 1831 – 691 bhp Emergency Generator RICE.

Subsection C. Applicable Regulations.
A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
Federal Rule Citations	
40 CFR 60, Subpart A, General Provisions	006
40 CFR 60, Subpart GG, NSPS for Stationary Gas Turbines	
40 CFR 63, Subpart A, General Provisions	008
40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE	
State Rule Citations	
62-4.070(3), F.A.C. – Standards for Issuing or Denying Permits	005, 006, 008
62-204.800, F.A.C. – Federal Regulations Adopted by Reference	
62-210.300, F.A.C. – Permits Required	
62-210.350, F.A.C. – Public Notice and Comment	
62-210.370(3) , F.A.C. – Annual Operating Reports	
62-210.900, F.A.C. – Forms and Instructions	
62-212.400, F.A.C. – Prevention of Significant Deterioration (PSD)	
62-213.205, F.A.C. – Annual Emission Fee	
62-213.400, F.A.C. – Permits and Permit Revisions Required	
62-213.430, F.A.C. – Permit Issuance, Renewal and Revision	
62-213.440, F.A.C. – Permit Content	
62-213.450, F.A.C. – Permit Review by EPA and Affected States	
62-296.320(2) , F.A.C. – Objectionable Odor Prohibition	
62-296.320(4) , F.A.C. – Particulate Emissions Standard	
62-296.320(4)(b) , F.A.C. – General Visible Emission Standard	
62-296.320(4)(c) , F.A.C. – Unconfined Emissions of Particulate Matter	
62-297.310, F.A.C. – General Emissions Test Requirements	005, 006
62-297.320, F.A.C. – Standards for Persons Engaged in Visible Emissions Observations	
Municipal Rule Citation	
Orange County Ordinance Chapter 15 Article III	All

The following conditions apply facility-wide to all emission 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 EPD. [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. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b), 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. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

a. Paving and maintenance of roads, parking areas, and yards.
b. Chemical (dust suppressants) or water application to:
   - Unpaved roads
   - Unpaved yard areas
c. Landscaping or planting of vegetation.
d. Confining abrasive blasting where possible.
e. Other techniques, as necessary.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received January 8, 2025.]

Reports and Fees

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

FW6. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's (DEP) Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall

only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, Post Office Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available 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. [Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, §403.0872(11), Florida Statutes (2013)]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

FW7. 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 and to the US. EPA at the address shown below within 60 days after the end of each calendar year during which the Title V air operation permit was effective. (See also Appendix RR, Conditions RR1 and RR7.) [Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
Attn: Air Enforcement Branch

FW8. Prevention of Accidental Releases (Section 112(r) of CAA). If, and when, the facility becomes subject to 112(r), the permittee shall:

a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: https://cdx.epa.gov. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: https://www.epa.gov/rmp. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
b. 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]

FW9. Semi-Annual Reports. The permittee shall monitor compliance with the terms and conditions of this permit and shall submit reports at least every six months to the compliance office. Each semi-annual report shall cover the 6-month periods of January 1 – June 30 and July 1 – December 31. The reports shall be submitted by the 60th day following the end of each calendar half (i.e., March 1st and August 29th of every year). All instances of deviations from permit requirements (including conditions in the referenced Appendices) must be clearly identified in such reports, including reference to the specific requirement and the duration of such deviation. If there are no deviations during the reporting period, the report shall so indicate. Any semi-annual reporting requirements contained in applicable federal NSPS or NESHAP requirements may

be submitted as part of this report. The submittal dates specified above shall replace the submittal dates specified in the federal rules. All additional reports submitted as part of this report should be clearly identified according to the specific federal requirement. All reports shall include a certification by a responsible official, pursuant to subsection 62-213.420(4), F.A.C. (See also Conditions RR2. – RR4. of Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements related to deviations.) [Rule 62-213.440(1)(b)3.a., F.A.C.; and, 40 CFR 60.19(d), 40 CFR 61.10(h) & 40 CFR 63.10(a)(5)]

{Permitting Note: EPA has clarified that, pursuant to 40 CFR 70.6(a)(3), the word "monitoring" is used in a broad sense and means monitoring (i.e., paying attention to) the compliance of the source with all emissions limitations, standards, and work practices specified in the permit.}

Other Requirements

FW10. Not Federally Enforceable. Orange County Ordinances. All air pollution sources located in Orange County are subject to the Orange County Code of Ordinances, including Chapter 15, Article III, Air Quality Control.

Subsection A. Emissions Unit 005 – Engine 1805

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

EU No.	Brief Description
005	Engine 1805 – 2,700 bhp RICE (2SLB).

Engine 1805 is a 2,700 bhp reciprocating internal combustion engine (RICE) installed in 1991. This Cooper-Bessemer Model GMVH-12C2 engine is a V-12, turbocharged 2 stroke lean burn (2SLB) engine. The fuel is natural gas from the pipeline. The maximum heat input is 21 MMBTU/hr (24-hour average) of natural gas. There are no pollution control devices on this engine. The exhaust stack is 50 ft high and 2.2 ft diameter. The exhaust flow is 19,753 ACFM.

{Permitting Note: This emission unit (EU) is regulated under 40 CFR Part 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62.204.800(11)(b), F.A.C. This EU is considered an "existing" stationary non-emergency RICE greater than 500 brake horsepower (HP), located at a major source of HAP, that commenced construction before 6/12/2006, and that has not been modified or reconstructed after this date. Therefore, it is not subject to NSPS 40 CFR 60, Subpart JJJJ. In accordance with 40 CFR 63.6590(b)(3)(i), existing spark ignition 2SLB stationary RICE with a site rating of more than 500 brake HP, located at a major source of HAP emissions do not have to meet the requirements of Subpart ZZZZ or Subpart A. Therefore, while subject to Subpart ZZZZ, EU 005 is currently not required to comply with any of Subpart ZZZZ or Subpart A requirements. Additionally, the proposed modification to allow bi-directional flow for EU 005 did not meet the definition of a "reconstruction" as defined at 40 CFR 63.2.}

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum natural gas consumption for EU 005 shall not exceed ~~20,400~~ 20,640 scf/hr (24 hour average) and the maximum heat input shall not exceed 21 MMBTU/hr (24 hour average). [Rules 62-210.200(PTE), F.A.C.; Permit No. AC48-189456]

A.2. Authorized Fuel. EU 005 shall fire only natural gas with a maximum of 10 grains of sulfur per 100 standard cubic feet of natural gas. [62-210.200(PTE), F.A.C.; Permit No. 0950190-006-AC]

A.3. Hours of Operation. EU 005 may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C.; Permit No. AC48-189456]

Emission Limitations and Standards

A.4. Visible Emissions. Visible emissions from EU 005 shall not exceed 10% opacity. [Permit No. AC48-189456]

A.5. Emissions Standards. The maximum allowable emission rates from EU 005 are as follows.

Pollutant	Lbs/hr	Tons/yr	Emission factor
Nitrogen Oxides	10.6	~~46.3~~4	1.78 g/bhp-hr
Carbon Monoxide	11.1	48.7	1.87 g/bhp-hr
VOC (non-methane)	2.6	11.6	0.44 g/bhp-hr
~~Sulfur Dioxide~~	~~0.47~~	~~2.0~~	~~7.90 gr S/100 scf~~
HAPs	1.67	7.3~~1~~2	0.000618 lb/bhp-hr

[Permit No. AC48-189456; Permit Nos. 0950190-006-AC & 0950190-012-AC]

Test Methods and Procedures

A.6. Annual Compliance Tests Required. During each calendar year (January 1st to December 31st), EU 005 shall be tested to demonstrate compliance with the emission standards for CO, NO_x, and visible emissions.

CO and NO_x emissions shall be tested concurrently at permitted capacity. ~~SO_2 emissions shall be calculated and reported based on fuel flow and vendor analysis of fuel sulfur content~~. In addition to the test results, each report shall include a general description of the maintenance activities and operation of this facility since the last test. [Rules 62-4.070(3) and 62-297.310(8), F.A.C.]

A.7. Compliance Test Notification. At least 15 days prior to the date on which each formal compliance test is due to begin, the permittee shall provide written notification of the test to the EPD. The notification must include the following information: the date, time and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and telephone number of the person conducting the test. [Rule 62-297.310(9), F.A.C.]

A.8. Operating Conditions during Emissions Testing. Testing of emissions shall be conducted with the emissions unit operating at the testing capacity. Testing capacity is defined as at least 90 percent of the maximum operation rate specified by specific condition **A.1** above. If it is impracticable to test at the testing capacity, an emissions unit may be tested at less than the testing capacity. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted. [Rule 62-297.310(3), F.A.C.]

A.9. Test Methods. Compliance with the NO_x, ~~SO_2~~, CO, visible emissions, and VOC standards for EU 005 shall be determined by the following reference methods as described in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297.401, F.A.C.

Method	Description of Method and Comments
1	Sample and Velocity Traverses for Stationary Sources
2	Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)
7E	Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)
25A	Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

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 EPD. [Rule 62-4.070(3), F.A.C.]

{Permitting Note: This table of compliance requirements summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.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. [Rule 62-297.310, F.A.C.]

{Permitting Note: Air compliance test notifications can now be completed online in the Department's Business Portal. To access this online process, go to http://www.fldepportal.com/go/home and sign in (or register if you're a new user) from the link in the upper right corner of the page. On the Welcome page select the Submit option, then select Registration/Notification, and then click on Air Compliance Test Notifications.

Once in the process, just carefully read the instructions on each screen (and under the Help tabs) to complete the notification.}

A.11. Initial Compliance EU 005. Initial compliance with the volatile organic compound (VOC) emission limits was demonstrated by EPA Method 25A, thereafter, compliance with the VOC emission limits is assumed, provided the CO allowable emission limit is not exceeded. Test results will be the average of three valid runs. [Rule 62-4.070(3), F.A.C.; Construction Permit No. AC48-189456]

Recordkeeping Requirements

A.12. Recordkeeping. In order to demonstrate compliance with specific condition number **A.1**, the permittee shall maintain a log at the facility for a period of at least 5 years from the date the data is recorded. The log shall contain at least the following for each month:

a. Designation of the month and year of operation for which the records are being tabulated;

b. Consecutive 24 hour average of heat input.

[Rule 62-4.070(3), F.A.C.]

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

EU No.	Brief Description
006	Engine 1806 – 7,200 bhp Gas Turbine.

Engine 1806 is a Cooper-Rolls Royce ~~Model 501-KC7 DLE SGT-A05~~ gas turbine* installed in 2003. The turbine is equipped with a dry low NO_x combustor design to minimize NO_x emissions. The gas turbine produces approximately 7,200 bhp (ISO) at 68 MMBTU/hr heat input. The maximum firing rate is approximately 65,100 standard cubic feet (SCF) per hour based on a natural gas heat content of 1040 BTU/SCF. When operating at capacity, exhaust gases exit a 6 ft diameter, 61 ft tall stack at 964°F, at a flow rate of 97,500 ACFM.

*{*Permitting Note: This gas turbine is a 2024 like-kind replacement unit (Model No. SGT-A05 KC7 DLE ASP-2254). A like-kind replacement does not meet the definition of a modification in NSPS Subpart A, so the unit is not subjected to NSPS Subpart KKKK.}*

{Permitting Note: This gas turbine is subject to NSPS 40 CFR Part 60 Subpart GG, Standards of Performance for Stationary Gas Turbines, and to 40 CFR Part 60 Subpart A, General Provisions.}

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum heat input rate to EU 006 shall not exceed 68 MMBtu/hour (24-hour average) while producing approximately 7200 bhp (ISO) based on a compressor inlet air temperature of 59°F, 100% load, and a higher heating value (HHV) of 1040 BTU/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 the performance curves or equations on file with the EPD. Compliance with this equipment specification shall be demonstrated based on the information required in specific condition **B.11** below. [Rule 62-210.200(PTE), F.A.C.; Permit No. 0950190-006-AC]

B.2. Authorized Fuel. EU 006 shall fire only natural gas with a maximum of 10 grains of sulfur/100 standard cubic feet of natural gas. [Rule 62-210.200(PTE), F.A.C.; Permit No. 0950190-006-AC]

B.3. Restricted Operation. The hours of operation for EU 006 are not limited (8,760 hours/year). Except for startup and shutdown, operation below 50% base load is prohibited for EU 006. [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.; Permit No. 0950190-006-AC]

Emission Limitations and Standards

B.4. Emissions Standards. Emissions from EU 006 shall not exceed the following standards.

Pollutant	Standards	Equivalent Maximum Emissions [f]		Rule Basis [g]
		lb/hour	TPY	
CO [a]	50.0 ppmvd @ 15% O2	6.91	30.227	Avoid Rule 62-212.400, F.A.C.
NOx [b]	25.0 ppmvd @ 15% O2	5.7	24.97	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	~~10.0 grains of sulfur per 100 SCF of gas~~	~~1.9~~	~~8.15~~	~~Avoid Rule 62-212.400, F.A.C. 40 CFR 60.333~~
Opacity [d]	10% opacity, 6-minute average	Not Applicable		Rule 62-4.070(3), F.A.C.
PM [e]	Efficient combustion of natural gas	~~0.5~~ 0.45	1.967	Rule 62-4.070(3), F.A.C.
VOC [e]	Efficient combustion of natural gas	~~0.2~~ 0.16	~~0.88~~ 0.69	Rule 62-4.070(3), F.A.C.

a. The CO standards are based on the average of three test runs as determined by EPA Method 10.

b. The NO_x standards are based on the average of three test runs as determined by 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/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 natural gas is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on a factor of 0.0066 lb/MMBtu heat input from AP-42 Table 3.1-2a. Equivalent maximum VOC emissions are based on a total hydrocarbon factor of 1.58 lb/eng-hr from the vendor and the conservative assumption that 10% of the hydrocarbons are regulated (non-methane) VOC. No testing is 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, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, and NO_x ~~and SO_2~~. ~~Mass emission rates for SO_2 shall be calculated based on actual fuel sulfur content and fuel flow rate~~. For tests conducted at 59°F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59°F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.
g. Compliance with the emissions standards of this permit ensures that the project remains a minor source of air pollution with respect to PSD.

[Rule 62-4.070(3), F.A.C.; Permit No. 0950190-012-AC]

Test Methods and Procedures

B.5. Annual Compliance Tests Required. During each calendar year (January 1st to December 31st), EU 006 shall be tested to demonstrate compliance with the emission standards for CO, NO_x, and visible emissions. CO and NO_x emissions shall be tested concurrently at permitted capacity. ~~SO_2 emissions shall be calculated and reported based on fuel flow and vendor analysis of fuel sulfur content~~. In addition to the test results, each report shall include a general description of the maintenance activities and operation of this facility since the last test. [Rules 62-4.070(3) and 62-297.310(8), F.A.C.]

B.6. Compliance Test Notification. At least 15 days prior to the date on which each formal compliance test is due to begin, the permittee shall provide written notification of the test to the EPD. The notification must include the following information: the date, time and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and telephone number of the person conducting the test. [Rule 62-297.310(9), F.A.C.]

B.7. Operating Conditions during Emissions Testing. Testing of emissions shall be conducted with the emissions unit operating at the testing capacity. Testing capacity is defined as at least 90 percent of the maximum operation rate specified by specific condition **B.1** above. If it is impracticable to test at the testing capacity, an emissions unit may be tested at less than the testing capacity. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted. [Rule 62-297.310(3), F.A.C.]

B.8. Test Methods. Required tests for EU 006 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 {Permitting Note: These methods shall be used as necessary to support other required methods.}
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure) {Permitting Note: This method shall be based on a continuous sampling train.}
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emission Rates {Permitting Note: This method shall be used as necessary to support other required methods.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines

Tests shall be conducted in accordance with the requirements specified in Rule 62-297, F.A.C. The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. [Rules 62-204.800 & 62-297.310, F.A.C.; 40 CFR Part 60 Appendix A; Permit No. 0950190-006-AC]

B.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.]

{Permitting Note: Air compliance test notifications can now be completed online in the Department's Business Portal. To access this online process, go to http://www.fldepportal.com/go/home and sign in (or register if you're a new user) from the link in the upper right corner of the page. On the Welcome page select the Submit option, then select Registration/Notification, and then click on Air Compliance Test Notifications. Once in the process, just carefully read the instructions on each screen (and under the Help tabs) to complete the notification.}

B.10. Test Reports. The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Rule 62-297.310(10), F.A.C. In addition, NO_x emissions shall be corrected to ISO ambient atmospheric conditions and compared to the NSPS Subpart GG standard identified in specific condition **B.23** below. For each test run, the report shall also indicate the natural gas firing rate (cubic feet/hour), heat input rate (MMBTU/ hour), the power output (bhp), percent peak load, and the inlet compressor temperature. [Rule 62-297.310(10), F.A.C.; 40 CFR 60.334]

B.11. Fuel Monitoring. The EU 006 shall fire only pipeline natural gas with a maximum fuel sulfur content of no more than 10 grains of sulfur/100 cubic feet of gas. The permittee shall take no allowance for fuel bound nitrogen (F-value = 0) when demonstrating compliance with the NSPS Subpart GG NO_x standard. Based on these restrictions, no monitoring for the fuel nitrogen or sulfur content is required. [Rule 62-4.070(3), F.A.C.; 40 CFR 60.334, as amended]

B.12. Operational Data. Using the automated gas turbine control system, the permittee shall monitor and record heat input (MMBTU), power output (bhp), and hours of operation for the gas turbine. Within 10 days of a request by EPD, the permittee shall be able to summarize the following information for a given day: heat input (MMBTU/hr, 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(3), F.A.C.]

B13. Component Replacements. For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and

testing requirements.

a. Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change operation or increase the capacity (heat input and power output rates) of the 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. The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify the make, model number, maximum heat input rate (MMBtu/hour), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This notification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify EPD in writing at least 15 days prior to conducting these tests. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting.

c. After investigation and for good cause, EPD may require special compliance tests pursuant to Rule 62-297.310(8)(c), F.A.C.

[Rules 62-210.200, 62-4.130, 62-4.160(2), (6), & (15), 62-297.310(8)(c), F.A.C.]

40 CFR Part 60 Subpart GG Requirements

B.14. Gas Turbine NSPS Requirements. The gas turbine shall comply with the New Source Performance Standards (NSPS) of Subpart GG in 40 CFR Part 60, adopted and incorporated by reference in Rule 62-204.800, F.A.C. The applicable NSPS requirements are provided in specific conditions **B.15** through **B.23** below. The EPD believes that the conditions in this permit are at least as stringent as, or more stringent than, the NSPS requirements of Subpart GG. [Rule 62-4.070(3), F.A.C.; 40 CFR Part 60 Subpart GG; Permit No. 0950190-006-AC]

B.15. Applicability. The provisions of this subpart are applicable to the following affected facilities: All stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBTU) per hour, based on the lower heating value of the fuel fired. Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions. [40 CFR 60.330; Permit No. 0950190-006-AC]

B.16. Definitions.

a. ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

b. Peak load means 100% of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.

c. Base load means the load level at which a gas turbine is normally operated

[40 CFR 60.331; Permit No. 0950190-006-AC]

B.17. NOx Standard. No permittee subject to the provisions Subpart GG shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

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

Where:

STD = allowable ISO corrected NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis),
Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour, and
F = NO_X emission allowance for fuel-bound nitrogen. For EU 006 at this facility, F = 0.

*{Permitting Note: The "Y" value when firing natural gas as provided by the manufacturer is approximately "11.4". The equivalent NO_x emission standard is 190 ppmvd at 15% oxygen. The emission standards in condition **B.4** above are much more stringent than this requirement.}*

[40 CFR 60.332; Permit No. 0950190-006-AC]

B.18. NOx Standard. Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 MMBTU/hour) but less than or equal to 107.2 gigajoules per hour (100 MMBTU/hour) based on the lower heating value of the fuel fired, shall comply with the provisions of condition **B.17** above. [40 CFR 60.332; Permit No. 0950190-006-AC]

B.19. SO_2 Standard. The permittee shall comply with the following requirements.

a. No permittee subject to Subpart GG shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.
b. No permittee subject to Subpart GG shall burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

[40 CFR 60.333; Permit No. 0950190-006-AC]

B.20. Monitoring of Operations. For the purpose of reports required under Section 60.7(c), periods of excess emissions that shall be reported are defined as follows for nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with Section 60.332 by the performance test required in Section 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in Section 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under Section 60.335(a).

{Permitting Note: Excess NO_x emissions reporting requirements do not apply. The gas turbine uses "dry" lean premix combustors and not wet injection to control NO_x emissions. As indicated above, the Subpart GG NO_x standard is 190 ppmvd at 15% oxygen. This is nearly eight times the NO_x standard specified in the permit and would be nearly impossible for this lean premix combustion turbine to exceed. As stated in the preamble to the July 2004 [Subpart GG] amendments, the rule changes do not impose any additional monitoring requirements for existing units.}

[40 CFR 60.334(j); Permit No. 0950190-006-AC]

B.21. Monitoring of Operations. The permittee shall monitor the nitrogen content of the fuel combusted in the turbine, if the permittee claims an allowance for fuel bound nitrogen (*i.e.*, if an F-value greater than zero is being or will be used by the owner or operator to calculate STD in section 60.332).

{Permitting Note: Because the nitrogen content of pipeline natural is negligible, the permittee does not claim an allowance for fuel bound nitrogen and will use "0" for the F-value when calculating the NO_x standard in section 60.332. The permit prohibits the permittee from claiming the allowance for fuel nitrogen. Therefore, no fuel nitrogen monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

[40 CFR 60.334(h); Permit No. 0950190-006-AC]

B.22. Monitoring of Operations. The permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in section 60.331(v), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring.

Section 60.331(v) states, "*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot. Natural gas does not include the following gaseous fuels: Landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value."

The permittee elects not to monitor the sulfur content of natural gas based on section 60.334(h)(3)(i), which states that, "The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less." The current tariff sheet specifies that natural gas delivered by the pipeline system shall contain not more than 10 grains of total sulfur per 100 cubic feet of gas. Therefore, the pipeline natural gas meets the above definition.

{Permitting Note: The permit requires the gas turbine to fire only pipeline natural gas with a maximum sulfur content of 10 grains of sulfur per 100 cubic feet of gas. Therefore, no fuel sulfur monitoring is required. The fuel monitoring provisions were revised pursuant to the final July 2004 amendments to Subpart GG.}

[40 CFR 60.334(h); Permit No. 0950190-006-AC]

B.23. Test Methods and Procedures.

a. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the EPD to determine the nitrogen content of the fuel being fired.

b. In conducting the performance tests required in section 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 CFR Part 60 Appendix A or other methods and procedures as specified in this section, except as provided for in section 60.8(b).

c. The permittee shall determine compliance with the nitrogen oxides and sulfur dioxide standards in sections 60.332 and 60.333(a) by computing the NO_x emission rate using the following equation:

$$NO_x = (NO_{xo})\ (Pr/Po)^{0.5}\ e^{19(Ho - 0.00633)}\ (288°K/Ta)^{1.53}$$

where:

NO_x = emission rate of NO_x at 15 percent O2 and ISO standard ambient conditions, volume percent.
NO_{xo} = observed NO_x concentration, ppm by volume.
Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
Po = observed combustor inlet absolute pressure at test, mm Hg.
Ho = observed humidity of ambient air, g H2O/g air.
e = transcendental constant, 2.718.
Ta = ambient temperature, °K.

d. **EPD Requirement**: NO_x emissions shall be corrected to ISO ambient atmospheric conditions for each required emissions performance test and compared to the NO_x standard specified in 40 CFR 60.332.

[40 CFR 60.335; Permit No. 0950190-006-AC]

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

EU No.	Brief Description
008	Engine ~~1808~~ 1832 – 306 bhp Emergency Generator RICE

Engine ~~1808~~ 1832 is a 306 bhp emergency generator RICE installed in 2001. This Caterpillar Model 3406 engine is fired by natural gas from the pipeline. There are no pollution control devices on this engine. The exhaust stack is 8-feet high and 0.5-feet diameter.

{Permitting Note: This RICE is subject to 40 CFR Part 63 Subpart ZZZZ and 40 CFR Part 63 Subpart A.}

C.1. Subpart ZZZZ General Compliance Requirements. The permittee shall operate the engine in EU 008 to be in compliance with the applicable operating limitations of Subpart ZZZZ at all times. At all times the permittee shall operate and maintain any engine in a manner consistent with safety and good air pollution control practices. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPD which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6605]

C.2. Subpart ZZZZ Continuous Compliance for Emergency RICE in EU 008. The permittee shall operate emergency stationary reciprocating internal combustion engines (RICE) according to the requirements in sub-paragraphs a., b. and c. In order for the engine to be considered an emergency stationary RICE under Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described subparagraphs a., b. and c. is prohibited. If the engine is not operated according to the requirements in sub-paragraphs a., b. and c., the engine will not be considered an emergency engine under the subpart and must meet all subpart requirements for non-emergency engines.

a. There is no time limit on the use of emergency stationary RICE in emergency situations.
b. The permittee may operate emergency stationary RICE for either of the following purposes of this sub-paragraph for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by subparagraph c. counts as part of the 100 hours per calendar year.
   (i) Subpart ZZZZ allows, and EPD recommends, maintenance checks and readiness testing of emergency generators. Maintenance checks and readiness testing is limited to 100 hours per year. The permittee may petition the EPD for approval of additional hours to be used for maintenance checks and readiness testing.
c. The permittee may operate emergency stationary RICE 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.

[Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6640(f)]

C.3. Subpart ZZZZ Operating Requirements. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6625(h)]

C.4. Subpart ZZZZ Operating Requirements. The permittee shall comply with the requirements in the following table for EU 008.

For EU 008	The permittee shall meet the following requirements.
	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;

	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6603 & 63.6640, and Table 2c]

C.5. Subpart ZZZZ Operating Requirements. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirements the tables above. The oil analysis must be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6625(i)]

C.6. Subpart ZZZZ Continuous Compliance. The permittee shall continuously comply with the operating limitations and work or management practices required in the following table for EU 008.

For EU 008	**Complying with the requirement to . . .**	**The permittee shall demonstrate continuous compliance by . . .**
	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow a facility maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6640 & Table 6]

MONITORING REQUIREMENTS

C.7. Hour Meter. Engines subject to 40 CFR Part 63 Subpart ZZZZ must have a non-resettable hour meter installed, if one is not already installed. [Rule 62-204.800(11)(b)82., F.A.C.; 40 CFR 63.6625(f)]

RECORDKEEPING REQUIREMENTS

C.8. Recordkeeping Log. In order to demonstrate compliance with conditions **C.1** through **C.7** of this permit, the permittee shall maintain a log. The log shall be completed within 30 days of the end of the month reported, and shall be retained on file at the facility for at least five years from the date the data is recorded. The log shall contain the following for each month:

a. Designation of month and year of operation for which records are being tabulated;
b. Monthly and consecutive 12-month totals of hours of operation of each emergency generator in EU 008; make a notation whether the operating hours are emergency or non-emergency;
c. A copy of each notification and report submitted to comply with Subpart ZZZZ for the engine in EU 008, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted, according to the requirement in 40 CFR Part 63 Subpart A, section 63.10(b)(2)(xiv).
d. Records of the occurrence and duration of each malfunction for EU 008;
e. Records of all required maintenance performed on EU 008;

f. For EU 008, records of actions taken during periods of malfunction to minimize emissions in accordance with specific condition **C.1**, including corrective actions to restore malfunctioning engines;
g. Records required in specific condition **C.6**, to show continuous compliance with each applicable operating limitation.

[Rule 62-4.070(3), F.A.C.; 40 CFR 63.6655(a), (d), (e) & (f)]

{Permitting Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month.}