

Duke Energy Florida, LLC

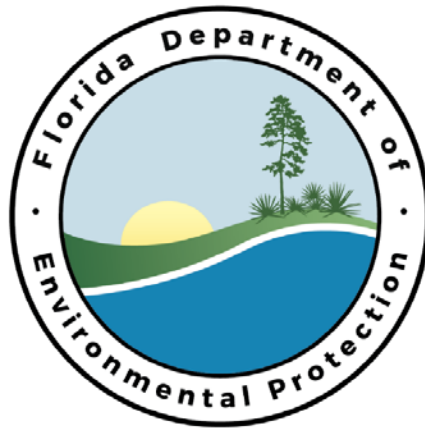
Suwannee River Power Plant

Facility ID No. 1210003
Suwannee County

Title V Air Operation Permit Revision

Permit No. 1210003-012-AV

(1st Revision of Title V Air Operation Permit No. 1210003-010-AV)



Permitting Authority:

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400
Telephone: (850) 717-9000
Email: DARM_Permitting@dep.state.fl.us

Compliance Authority:

State of Florida
Department of Environmental Protection
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256-7590
Telephone: (904) 256-1700
Fax: (904) 256-1590

Title V Air Operation Permit Revision

Permit No. 1210003-012-AV

Table of Contents

<u>Section</u>	<u>Page Number</u>
Placard Page	1
I. Facility Information.	
A. Facility Description.	2
B. Summary of Emissions Units.	2
C. Applicable Regulations.	2
II. Facility-wide Conditions.	4
III. Emissions Units and Conditions.	
A. Combustion Turbine Peaking Unit No's. CTP1, CTP2 & CTP3 (EUs 004 to 006).	7
B. 155 HP Emergency Diesel Firewater Pump Engine (EU 009).	13
Emission Unit 009, 190 HP Emergency Diesel Generator (EU 010)	
Appendices.	See appendices document
Appendix A, Glossary.	
Appendix BOP, Best Operational Practices for Startup and Shutdown.	
Appendix CAM, Compliance Assurance Monitoring Plan.	
Appendix CP-1, Compliance Plan.	
Appendix 40 CFR 60, Subpart A, General Provisions.	
Appendix 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines.	
Appendix 40 CFR 63, Subpart A, General Provisions.	
Appendix 40 CFR 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines.	
Appendix I, List of Insignificant Emissions Units and/or Activities.	
Appendix RR, Facility-wide Reporting Requirements.	
Appendix TR, Facility-wide Testing Requirements.	
Appendix TV, Title V General Conditions.	
Referenced Attachments.	At end of appendices document
Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance.	
Table H, Permit History.	



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

Permittee:

Duke Energy Florida, LLC
4037 River Road
Live Oak, Florida 32060-8746

Permit No. 1210003-012-AV
Suwannee River Power Plant
Facility ID No. 1210003
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility. The existing Suwannee River Power Plant is in Suwannee County at 4037 River Road, Live Oak, Florida. UTM Coordinates are: Zone 17, 290.5 km East and 3362.2 km North; Latitude: 30° 22' 35" North and Longitude: 83° 10' 50" 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 and 62-214. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Executed in Tallahassee, Florida.

1210003-010-AV Effective Date: January 1, 2015

1210003-012-AV Effective Date: July 3, 2107

Renewal Application Due Date: May 20, 2019

Expiration Date: December 31, 2019

For:

Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

SA/dlr

Subsection A. Facility Description.

Duke Energy Florida, LLC operates the Suwannee River Power Plant. The existing facility is a nominal 190 megawatt (MW) electrical generation facility comprised of three combustion turbine peaking (CTP) units, CTP1, CTP2 and CTP3. Each CTP unit is comprised of two identical simple cycle aero-derivative combustion turbine engines (PA and PB) and one common electrical generator. These emission units (EU) are designated as EU 004, EU 005 and EU 006. The CTP units fire natural gas or No. 2 fuel oil. Nitrogen oxide (NO_x) emissions from each CTP unit are controlled by using water injection for both fuel oil and natural gas. The facility also has an emergency generator (EU 009) diesel engine rated at 190 horsepower (HP), and an emergency firewater pump diesel engine (EU 010) rated at 155 HP. Three natural gas-fired steam generator units, Boiler Nos. 1, 2, and 3 (EU Nos. 001, 002, and 003), were retired on December 31, 2016.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
004	Combustion Turbine Peaking Unit, CTP1 (P1A and P1B)
005	Combustion Turbine Peaking Unit, CTP2 (P2A and P2B)
006	Combustion Turbine Peaking Unit, CTP3 (P3A and P3B)
009	190 Hp Emergency Diesel Generator Diesel Engine
010	155 Hp Emergency Diesel Firewater Pump Diesel Engine

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

Subsection C. Applicable Regulations.

Based on the Title V air operation permit revision application received March 29, 2017, this facility is not a major source of hazardous air pollutants (HAP). The existing facility is a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C. 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 (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE) adopted in Rule 62-204.800(11)(b), F.A.C. However, since the engines being operated meet the Subpart ZZZZ definition of “existing units,” there are no unit specific applicable requirements that must be met pursuant to this rule. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
<i>Federal Rule Citations</i>	
40 CFR 60, Subpart A, New Stationary Source Performance Standards (NSPS) General Provisions	004, 005 & 006
40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines	
40 CFR 64, Compliance Assurance Monitoring (CAM)	
40 CFR 63, Subpart A, General Provisions	009 & 010
40 CFR 63, Subpart ZZZZ - NESHAP	
<i>State Rule Citations</i>	
Rule 62-204.800, F.A.C., Federal Regulations Adopted by Reference	004, 005, 006, 009 & 010
Rule 62-210, F.A.C., Permits Required	
Rule 62-213, F.A.C., Title V Air Operation Permits for Major Sources of Air Pollution	

Regulation	EU No(s).
Rule 62-296, F.A.C., Stationary Sources - Emission Limiting Standards	
Rule 62-212.400, F.A.C., Prevention of Significant Deterioration	004, 005 & 006
Rule 62-297, F.A.C., Stationary Sources - Emissions Monitoring	004, 005 & 006

[Table of Contents](#)

SECTION II. FACILITY-WIDE CONDITIONS.

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

FW1. Appendices. The permittee shall comply with all documents identified in Section V, 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. 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: paving and maintenance of roads, parking areas and yards; chemical (dust suppressants) or water application to unpaved roads, unpaved yard areas and open stock piles; removal of particulate matter (PM) from roads and other unpaved areas to prevent re-entrainment and from buildings or work areas to prevent airborne PM; landscaping or planting of vegetation; use of hoods, fans, filters and similar equipment to contain, capture and/or vent PM; confining abrasive blasting where possible; and, enclosure or covering of conveyor systems.

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received May 16, 2014]

Reports and Fees

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

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 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

SECTION II. FACILITY-WIDE CONDITIONS.

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, P.O. 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: <http://www2.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 Monitoring Reports.** The permittee shall monitor compliance with the terms and conditions of this permit and shall submit reports of any deviations from the requirements of these conditions at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports, including reference to the specific requirement and the duration of such deviation. All reports shall be accompanied by 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.]

SECTION II. FACILITY-WIDE CONDITIONS.

{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.}

[Table of Contents](#)

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

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

EU No.	Brief Description
004	Combustion Turbine Peaking Unit, CTP1 (P1A and P1B)
005	Combustion Turbine Peaking Unit, CTP2 (P2A and P2B)
006	Combustion Turbine Peaking Unit, CTP3 (P3A and P3B)

All three generating units are Turbo Power and Marine Systems, Model FT4C-3 LF water injected “Twin-Pac” units and are identical in configuration. Each CTP unit is comprised of two identical simple cycle aero-derivative combustion turbine (CT) engines (PA and PB) and one common electrical generator. These emission units are designated as EU 004, EU 005 and EU 006.

The CTP units fire natural gas or No. 2 distillate fuel oil. NO_x emissions from each CTP unit are controlled by using water injection for both fuel oil and natural gas firing. Natural gas and No. 2 distillate fuel oil can be fired in these emissions units. However, CTP2 does not fire natural gas because it has not yet been connected to do so. The maximum allowable No. 2 distillate fuel oil sulfur content is 0.5%, by weight. Each emissions unit has a maximum generating output of 63,000 kW (63 MW).

The rectangular stack parameters are identical for all three units: height, 22 feet; effective diameter, 11.3 feet; exit temperature, 830 °F; and, actual stack gas flow rate, 1,255,500 acfm. Temperature and exhaust flow rate will vary with CT load, fuel type and ambient conditions. CTP Unit Nos. 1 and 2 (CTP1 and CTP2) commenced commercial operation in October 1980. CTP Unit No. 3 (CTP3) commenced commercial operation in November 1980.

{Permitting note(s): These emissions units are regulated under NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(8)(b), F.A.C.; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) [PSD-FL-014, as amended]; Rule 62-212.400(10), F.A.C., Best Available Control Technology (BACT) Determination dated August 16, 1978; and 40 CFR 64, Compliance Assurance Monitoring (CAM).}

Essential Potential to Emit (PTE) Parameters

A.1. Hours of Operation.

- a. *Natural Gas:* The permitted hours of operation on natural gas are not limited. [Permit No. 1210003-011-AC; Rules 62-4.070(3) and 62-210.200(225) - PTE, F.A.C.; Permit Nos. AC61-11862, -11863 and -11864; and, PSD-FL-014]

*{Permitting note: The NO_x cap in **Specific Condition A.2** effectively limits operation of the turbines. The NO_x cap is roughly equivalent to 3,000 hours of operation per combustion turbine unit per rolling 12-month period.}*

- b. *Limited Hours of Operation on Fuel Oil:* Each combustion turbine may operate on No. 2 fuel oil for no more than 1,500 hours per 12-month period, rolled monthly. [Permit No. 1210003-011-AC; Rules 62-4.070(3) and 62-210.200(225) - PTE, F.A.C.]

A.2. Cap on Nitrogen Oxides Emissions. Emissions of nitrogen oxides from these three emissions units, combined, shall not exceed 633 tons per 12-month period, rolled monthly. Emissions shall be calculated monthly based on the appropriate turbine-specific NO_x emissions factor for that fuel, as required by **Specific Condition A.18**, and the amount of that fuel fired in the turbine during the month, as required by **Specific Condition A.16**. [Permit No. 1210003-011-AC; Rules 62-4.070(3) and 62-210.200(225) - PTE, F.A.C.; Avoidance of PSD]

A.3. Permitted Capacity. The maximum heat input shall not exceed 739 MMBtu/hr at the lower heating value (LHV) at 59 °F while firing No. 2 distillate fuel oil heat content of 138 MMBtu/1000 gallons or natural gas

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

heat content of 1,020 Btu/ft³. Manufacturer's curves approved by the Department for the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. [Rules 62-4.160(2), 62-210.200 (Definitions - PTE); 40 CFR 60.332(b); and, PSD-FL-014]

A.4. Methods of Operation - Fuels.

- a. Only natural gas or No. 2 distillate fuel oil shall be fired in the CTs. The burning of other fuels requires review, public notice, and approval through the preconstruction process (Chapters 62-4, 62-210 and 62-212, F.A.C.). Initial compliance has not yet been demonstrated for firing natural gas in CTP Unit No. 2 (CTP2); as such the permittee must comply with the attached compliance plan in **Appendix CP-1, Compliance Plan.**
- b. The maximum No. 2 distillate fuel oil that can be fired is 37,910 lbs/hr (127 barrels at 59 °F). [Rules 62-4.160(2), 62-210.200 (Definitions - PTE), 62-213.410, 62-213.440(1) & 213.440(2), F.A.C.; AC61-11862, -11863 & -11864; BACT Determination dated August 16, 1978; and, PSD-FL-014]

Air Pollution Control Technologies and Measures

- A.5. Water Injection - NO_x Control.** NO_x from the CTs shall be controlled by water injection for both fuel oil and natural gas firing. [Rules 62-4.070(1) & (3), and 62-210.650, F.A.C.; PSD-FL-014; and, BACT Determination dated August 16, 1978]

Emission Limitations and Standards

Unless otherwise specified, the averaging times for Specific Conditions **A.6 - A.10** are based on the specified averaging time of the applicable test method.

- A.6. NO_x - While burning No. 2 Distillate Fuel Oil.** NO_x emissions shall not exceed 75 ppm by volume at 15 percent oxygen and on a dry basis, adjusted per 40 CFR 60.332(a), while burning No. 2 distillate fuel oil. [40 CFR 60.332(a); PSD-FL-014; and, BACT Determination dated August 16, 1978]
- A.7. NO_x - While burning Natural Gas.** NO_x emissions shall not exceed 68 ppm by volume at 15 percent oxygen and on a dry basis, while burning natural gas. [PSD-FL-014]
- A.8. Sulfur Dioxide (SO₂).** The owner or operator shall not cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.0095 percent by volume at 15 percent oxygen on a dry basis. {The equivalent maximum allowed sulfur dioxide emission rate shall not exceed 379 lbs/hr/CTP}. [PSD-FL-014]
- {Permitting Note: Meeting the requirements with regards to fuel sulfur content for No. 2 fuel oil and natural gas as required by Specific Conditions A.9 and A.21 ensures compliance with this permit condition.}*
- A.9. Sulfur Dioxide - Sulfur Content.** The sulfur content of any fuel fired in any stationary gas turbine shall not exceed 0.5 percent, by weight, and may be used to determine compliance with the SO₂ limit. [PSD-FL-014]
- A.10. Visible Emissions.** Visible emissions shall be less than 20 percent opacity. [PSD-FL-014; BACT Determination dated August 16, 1978; and, AC61-11862, -11863 & -11864]

Excess Emissions

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

- A.11. Excess Emissions Allowed - Startup, Shutdown or Malfunction.** Excess emissions resulting from startup, shutdown or malfunction shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

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.]

- A.12. Best Operational Practices to Minimize Excess Emissions.** The permittee shall follow the best operational practices to minimize excess emissions during startup and shutdown as described in **Appendix BOP, Best Operational Practices for Startup and Shutdown.** [Rules 62-210.700(2) and 62-213.440(1) (Operational Requirements that Assure Compliance), F.A.C.; and, Proposed by the Applicant in the Renewal Application]
- A.13. 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(4), F.A.C.]

Monitoring of Operations

- A.14. Monitoring of Fuel Being Fired.** The permittee shall monitor sulfur content, nitrogen content and lower heating value (LHV) of the No. 2 distillate fuel oil and sulfur content and lower heating value of natural gas fired in the turbine. These values may be provided by the vendor and the frequency of determinations of these values shall be as follows:
- No. 2 Distillate Fuel Oil.** The values, sulfur and nitrogen content, shall be determined on each occasion that fuel is delivered and transferred to the storage tanks from any other source. The permittee may use a certified fuel analysis from the fuel vendor or other fuel analysis performed on each delivery or transfer. Records of these values shall be kept by the facility for a five year period for regulatory agency inspection purposes.
 - Natural Gas Monitoring.** Monitoring of fuel nitrogen content shall not be required for natural gas. [40 CFR 60.334(h); and, Rule 62-213.440, F.A.C.]

{Permitting Note: Pursuant to 40 CFR §60.334(h)(3), the CTP units are exempt from the NSPS Subpart GG requirement to periodically monitor the total sulfur content of natural gas because the CTP units combust natural gas from a pipeline with a current, valid tariff sheet specifying a maximum total sulfur content of 20 grains of sulfur or less per 100 standard cubic feet.}

Monitoring Requirements

- A.15. CAM Plan.** These emissions units are subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM for the controlled emissions of NO_x. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C. [40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]
- A.16. Monitoring of Operations.** Daily, the permittee shall monitor and record the amount of each fuel fired in each peaking unit and the amount of time each peaking unit is operated on each fuel. [Rule 62-4.070(3), F.A.C.]

Test Methods and Procedures

- A.17. Test Methods.** Required tests shall be performed in accordance with the following reference methods:

EPA Methods	Description of Method(s) and Comment(s)
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
6, 6A, 6B or 6C	Methods for Determining SO ₂ Emissions
Appendix D, 40 CFR 75	Optional SO ₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units
7, 7A, 7C, 7D or 7E	Determination of NO _x Emissions

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

EPA Methods	Description of Method(s) and Comment(s)
9	Visual Determination of the Opacity of Emissions (VE)
20	Determination of NO _x , SO ₂ and Diluent Emissions from Stationary Gas Turbines

The above methods are described in Chapter 62-297, F.A.C. and/or 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. [Chapter 62-297, F.A.C.]

- A.18. Annual Compliance Test.** Except as specified in **Appendix TR, Facility-Wide Testing Requirements**, during each calendar year, Emissions Unit ID Nos. 004, 005 and 006 shall be tested to demonstrate compliance with the emissions standard for VE. Each turbine shall be tested annually to determine a turbine-specific, fuel-specific NO_x emissions factor, in terms of lb NO_x per MMBtu heat input. Each turbine shall be tested annually on each permitted fuel. For demonstrating compliance with the NO_x cap in **Specific Condition A.2**, the emissions factor to be used for a given month of operation for a specific turbine and fuel shall be the arithmetic mean of all NO_x stack tests of that fuel in that turbine from the previous five years. A new emissions factor will not apply retroactively to months of operation that occurred before the emissions test was performed. [Permit No, 1210003-011-AC Rule 62-297.310(8)(a)1, F.A.C.; Avoidance of PSD]
- {Permitting note: These turbines are already required to demonstrate compliance with their BACT and NSPS Subpart GG NO_x limits via annual stack test. These same stack tests may be used to determine the NO_x emissions factors.}*
- A.19. 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.]
- A.20. Testing.** The monitoring device of 40 CFR 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with the permitted NO_x standard at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer. Testing at the four load points and correction to ISO is an initial compliance test requirement only and not an annual compliance test requirement; however, when testing shows that NO_x emissions exceed the standard when operating at capacity, the permittee shall recalibrate the NO_x emission control system using the emission testing at four loads as required in 40 CFR 60.335(b)(2). [40 CFR 60.335(b)(2); and, Applicant Request (originally requested in a letter received on 11/12/1997)]
- A.21. Sulfur Dioxide - Sulfur Content.** The owner or operator shall determine compliance with the sulfur content standard of 0.5 percent, by weight, as follows: ASTM D 2880-96, or later editions, shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, ASTM D 3031-81(86), ASTM D 4084-94, ASTM D 3246-92, ASTM D 1552-95, or later editions, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator. Alternatively, fuel oil sulfur content may be evaluated using the methods specified in Section 2.2.5 (for fuel oil) and in Section 2.3.3.1.2 (for natural gas) of Appendix D to 40 CFR 75, as amended. In addition, any ASTM method (or later editions) referenced in Rule 62-297.440(1) F.A.C. is acceptable. Sulfur content monitoring is not required for gaseous fuels that meet the 40 CFR 60.331(u) definition of “natural gas” in accordance with the procedures specified in 40 CFR 60.334(h)(3). [40 CFR 60.335(d); Rules 62-213.440 and 62-297.440, F.A.C.; and, Applicant Request]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

- A.22. Operating Rate during Testing.** Testing of emissions shall be conducted with each emissions unit operation at capacity. Capacity is defined as 95 to 100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then an emissions unit may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. 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. [Rule 62-297.310(2), F.A.C.; and, Applicant Request (originally requested in a letter received on 11/12/1997).]
- A.23. Notification:** The permittee shall notify the Compliance Authority in accordance with **Appendix TR, Facility-Wide Testing Requirements** to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix TR. [Permit No. 1210003-012-AC and Rule 62-297.310(9), F.A.C.]

Recordkeeping and Reporting Requirements

- A.24. Reporting Schedule.** The following report shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition
NSPS Excess Emissions and Monitoring System Performance	Every 6 months (semi-annual), except when more frequent reporting is specifically required	B.27.

[40 CFR 60, Subpart A.]

- A.25. Plant Log.** The permittee shall maintain a log of operation on site. The log shall include the amount of each fuel combusted for each peaking unit and the hours of operation on fuel oil, for each day the peaking unit is operated. After each calendar month, the permittee shall calculate and record the following:
- The rolling 12-month hours of operation on fuel oil for each unit, for compliance with the fuel oil operation limitation in **Specific Condition A.1.b.**,
 - The NO_x emissions for the month, based on the amount of each fuel fired and the appropriate unit-specific, fuel-specific NO_x emissions factor from **Specific Condition A.18** (the arithmetic mean of all NO_x stack tests of that fuel in that turbine from the previous five years), and
 - The rolling 12-month total NO_x emissions from the peaking units, for compliance with the NO_x cap in **Specific Condition A.2.**

The log may be in paper or electronic form, and the log shall be made available for inspection at the plant at any time. [Rule 62-4.070(3), F.A.C.; Permit No. PSD-FL-014] [PSD-FL-014, Condition 6.]

- A.26. Other Reporting Requirements.** See **Appendix RR, Facility-Wide Reporting Requirements**, for additional reporting requirements. [Rule 62-213.440, F.A.C.]
- A.27. Test Reports.** The permittee shall submit to the Compliance Authority a written test report on the results of each NO_x stack test as soon as practicable, but not later than 45 days after the last run of each test is completed. Each report shall include the calculated turbine-specific, fuel-specific NO_x emissions factor, in units of lb/MMBtu, that results from each test. [Rule 62-297.310(10), F.A.C.]
- A.28. Periodic Reporting.** In each semi-annual monitoring report, the permittee shall clearly indicate the rolling 12-month NO_x emissions from these units for each of the six compliance periods that concluded during the reporting period. If the permittee fails to comply with any limit or restriction in this permit, the permittee shall notify the Compliance Authority within one business day of discovery. [Rule 62-213.440(1)(b), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Combustion Turbine Peaking Units (EU 004 to 006)

NSPS 40 CFR 60 Requirements

- A.29. NSPS Requirements - Subpart A.** This emissions unit shall comply with all applicable requirements of 40 CFR 60, Subpart A, General Provisions, including:
- 40 CFR 60.7, Notification and Recordkeeping
 - 40 CFR 60.8, Performance Tests
 - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
 - 40 CFR 60.12, Circumvention
 - 40 CFR 60.13, Monitoring Requirements
 - 40 CFR 60.19, General Notification and Reporting Requirements,
- Which have been adopted by reference in Rule 62-204.800(8)(d), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.4, 40 CFR 60.8(b)(2) and (3), 40 CFR 60.11(e)(7) and (8), 40 CFR 60.13(g), (i) and (j)(2), and 40 CFR 60.16. This emissions unit shall comply with **Appendix 40 CFR 60 Subpart A** included with this permit. [Rule 62-204.800(8)(d), F.A.C.]
- A.30. NSPS Requirements - Subpart GG.** Except as otherwise provided in this permit, the combustion turbine shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(8)(b), F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 60.334(b)(2) and 40 CFR 60.335(f)(1). The Subpart GG requirement to correct test data to ISO conditions applies, but such correction is not required to demonstrate compliance with the non-NSPS permit standard(s). This emissions unit shall comply with **Appendix 40 CFR 60 Subpart GG** attached to this permit. [Rule 62-204.800(8)(b), F.A.C.]

[Table of Contents](#)

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emergency Diesel Engines (EU 009 & 010)

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

EU No.	Brief Description
009	190 Hp Emergency Generator Diesel Engine
010	155 Hp Emergency Diesel Firewater Pump Diesel Engine

This section is comprised of two stationary compression ignition (CI) reciprocating internal combustion engines (RICE) that use only low-sulfur diesel fuel. Air pollutant emissions from these engines are uncontrolled.

The following table provides important details for these emissions units:

Identification	Engine Brake HP	No. of Cylinders	In-service Date	Model No.	Displacement liters/cylinder (L/C)	Applicable Requirements for CI Type Engines
EU 009 Emergency Generator Diesel Engine	190 HP	6	1967	HRF-6	<10	40 CFR 63, Subparts A and ZZZZ These engines are an 'existing' units
EU 010 Emergency Diesel Firewater Pump Diesel Engine	155 HP	8	1971	V8-210-IF	<10	

*{Permitting Note: These compression ignition (CI) engines are regulated under 40 CFR 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 permit section addresses an "existing" emergency stationary CI RICE less than or equal to 500 HP with a displacement of less than 10 liters per cylinder that is located at an **Area source** of HAPs and that has not been modified or reconstructed after 6/12/2006. If the RICE is modified or reconstructed after 7/11/2005, the NSPS 40 CFR 60, Subpart IIII, will then apply.*

Essential Potential to Emit (PTE) Parameters

B.1. Hours of Operation.

- Emergency Situations:* There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]
- Maintenance and Testing:* Each RICE is authorized to operate 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. [40 CFR 63.6640(f)(1)]
- Non-emergency Situations:* This engine is authorized to 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. [40 CFR 63.6640(f)(1)]
- Engine Startup:* During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for the appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6625(h)]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emergency Diesel Engines (EU 009 & 010)

Emission Limitations and Operating Requirements

{Permitting note: The 'existing' stationary CI engines with ≤ 500 HP do not have specific numerical emission limitations and standards.}

B.2. Work or Management Practice Standards

- a. *Oil*: Change oil and filter every 500 hours of operation or annually, whichever comes first. [40 CFR 63 Subpart ZZZZ Table 2d]
- b. *Air Cleaner*: Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first. [40 CFR 63 Subpart ZZZZ Table 2d]
- c. *Hoses and Belts*: Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63 Subpart ZZZZ Table 2d(4)]
- d. *Operation and Maintenance*: Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or develop and follow your own 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. [40 CFR 63.6625(e)]
- e. *Oil Analysis*: The owner or operator has the option of using oil analysis to extend the change requirement. The oil analysis must be performed at the same frequency specified for changing the oil in **B.3.a**. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent of 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 of water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must 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 engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must 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. [40 CFR 63.6625(i)]

Monitoring of Operations

- B.3. Hour Meter**. The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

Compliance

- B.4. Continuous Compliance**. Each unit shall be in compliance with the operating standards in this section at all times. [40 CFR 63.6605(a)]
- B.5. Operation and Maintenance of Equipment**. At all times the owner or operator must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority 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. [40 CFR 63.6605(b)]

Recordkeeping Requirements

- B.6. Notification, Performance and Compliance Records**.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emergency Diesel Engines (EU 009 & 010)

- a. The owner or operator must keep the records required in specific condition **B.2.d** of this section to show continuous compliance with each emission limitation or operating requirement.
- b. The owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

[40 CFR 63.6655]

B.7. Malfunction Records.

- a. Records of the occurrence and duration of each malfunction of operation (i.e. process equipment) or the air pollution control and monitoring equipment.
- b. Records of actions taken during periods of malfunction to minimize emissions in accordance with specific condition **B.5.** of this section including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655]

B.8. Maintenance Records.

- a. Records of all required maintenance performed on the air pollution control and monitoring equipment.
- b. (The owner or operator must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to its own maintenance plan.

[40 CFR 63.6655]

B.9. Record Retention.

- a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
- b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

Reporting Requirements

- B.10. Emergency Situations.** If an emergency engine is operating during an emergency and it is not possible to shut down the engine to perform the work practice requirements on the schedule required in specific condition **B.2.** of this section, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63, Subpart ZZZZ, Table 2d, footnote 1]

General Provisions

- B.11. 40 CFR 63 Subpart A, General Provisions.** This engines shall comply with the following applicable requirements of 40 CFR 63 Subpart A, General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emergency Diesel Engines (EU 009 & 010)

63.14. This engine shall comply with the applicable portions of Appendix 40 NESHAP Subpart A included with this permit, as specified below:

General Provisions Citation	Subject of Citation
63.1	General applicability of the General Provisions
63.2	Definitions. Additional terms defined in §63.6675.
63.3	Units and abbreviations
63.4	Prohibited activities and circumvention
63.5	Construction and reconstruction
63.6(a)	Applicability
63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources
63.6(b)(5)	Notification
63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources
63.6(c)(1)–(2)	Compliance dates for existing sources
63.6(c)(5)	Compliance dates for existing area sources that become major sources
63.6(f)(2)	Methods of determining compliance
63.6(f)(3)	Finding of compliance
63.6(g)(1)	Use of alternate
63.6(i)	Compliance extension procedures and criteria
63.6(j)	Presidential compliance exemption
63.7(a)(3)	CAA section 114 authority
63.7(e)(4)	Administrator may require other testing under section 114 of the CAA
63.9(a)	Applicability and State delegation of notification requirements
63.9(i)	Adjustment of submittal deadlines
63.9(j)	Change in previous information
63.10(a)	Administrative provisions for recordkeeping/reporting
63.10(b)(1)	Record retention
63.10(b)(2)(xii)	Records when under waiver
63.10(b)(2)(xiv)	Records of supporting documentation
63.10(b)(3)	Records of applicability determination
63.10(d)(1)	General reporting requirements
63.10(d)(4)	Progress reports
63.10(f)	Waiver for recordkeeping/reporting
63.12	State authority and delegations
63.13	Addresses
63.14	Incorporation by reference
63.15	Availability of information

[40 CFR 63.6665]

[Table of Contents](#)