

# Florida Power and Light Company Lauderdale Plant

Facility ID No. 0110037

Broward County

Title V Air Operation Permit Renewal

**Permit No. 0110037-019-AV**

(Renewal of Title V Air Operation Permit No. 0110037-008-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](mailto:DARM_Permitting@dep.state.fl.us)

**Compliance Authority:**

Broward County Pollution Prevention

Remediation and Air Quality Division

One North University Drive, Suite 203

Plantation, Florida 33324-2038

Telephone: (954) 519-1483

Fax: (954) 519-1495

## Title V Air Operation Permit Renewal

Permit No. 0110037-019-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. ....	3
II. Facility-wide Conditions. ....	4
III. Emissions Units and Conditions.	
A. Emission Units 035 – 038, Combined-Cycle CT with Heat Recovery Steam Generators. ....	7
B. Emission Units 046 – 049, and 053, Simple Cycle Combustion Turbines (CT) Unit 6. ....	15
C. Emission Units 027 – 030, Fuel Storage Tanks. ....	26
D. Emission Unit 039, Site Solvent Usage. ....	28
E. Emission Unit 044, Emergency Diesel Fire Pump Engine. ....	29
F. Emission Unit 042, Auxiliary Boiler. ....	33
G. Emission Unit 003, Two Simple-Cycle CT. ....	36
H. Emission Unit 054, Circuit Breakers. ....	40
IV. Acid Rain Part. ....	41
Phase II Acid Rain Application/Compliance Plan.	
Phase II Acid Rain NO <sub>x</sub> Compliance Plan.	
V. Appendices. ....	See Appendices Document
Appendix A, Glossary.	
Appendix CFMS, Customized Fuel Monitoring Schedule.	
Appendix I, List of Insignificant Emissions Units and/or Activities.	
Appendix NESHAP, Subpart A, General Provisions.	
Appendix NESHAP, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines.	
Appendix NESHAP, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE).	
Appendix NESHAP, Subpart DDDDD, NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.	
Appendix NSPS, Subpart A, General Provisions.	
Appendix NSPS, Subpart GG, Standards of Performance (SOP) for Stationary Gas Turbines.	
Appendix NSPS, Subpart KKKK, SOP for Stationary Combustion Turbines.	
Appendix NSPS, Subpart TTTT, SOP for Greenhouse Gas Emissions for Electric Generating Units	
Appendix RR, Facility-wide Reporting Requirements.	
Appendix TR, Facility-wide Testing Requirements.	
Appendix TV, Title V General Conditions.	
Appendix U, List of Unregulated Emissions Units and/or Activities.	
Referenced Attachments. ....	At End
Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance (40 CFR 60, July, 1996).	
Table H, Permit History.	
Attachment CBMP – Circuit Breaker Monitoring Plan	



# 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:**

Florida Power and Light Company  
4300 SW 42nd Street  
Fort Lauderdale, Florida 33314

Permit No. 0110037-019-AV  
Lauderdale Plant  
Facility ID No. 0110037  
Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V air operation permit for the above referenced facility. The existing Lauderdale Plant is located two miles West of Ravenswood Road and can be accessed from Southwest 42nd Street and Griffin Road, Fort Lauderdale, in Broward County. UTM coordinates are: Zone 17, 580.2 kilometers (km) East and 2883.3 km North. Latitude is: 26° 04' 05" North; and, Longitude is: 80° 11' 54" 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.

0110037-019-AV Effective Date: October 2, 2018

Renewal Application Due Date: February 19, 2013

Expiration Date: October 2, 2023

*For:*

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

SA/dlr/lcr

## SECTION I. FACILITY INFORMATION.

### **Subsection A. Facility Description.**

The existing Florida Power and Light Company, Lauderdale Plant, consists primarily of two combined-cycle combustion turbine (CCCT) generating units (Unit 4 and Unit 5), five simple-cycle combustion turbines (SCCT) General Electric (GE) 7F.05 generating units (Units 6A through 6E), two existing simple-cycle gas turbine units, 15.5 million British thermal units per hour (MMBtu/hr) auxiliary boiler, a 376 horse-power (HP) emergency fire pump engine, and light distillate fuel oil storage tanks. Each combined-cycle unit (EU 035 – EU 038) consists of two combustion turbines (CT's) which each exhaust through a separate heat recovery steam generator (HRSG). Each HRSG converts the heat from the CT exhaust into steam. The steam produced from the two HRSG units drives one single-reheat turbine generator. Each combined-cycle unit has a net summer continuous capability of 430 megawatts (MW). Nitrogen oxides (NO<sub>x</sub>) emissions are controlled by using steam injection and are monitored by continuous emissions monitoring system (CEMS). Unit 4 and Unit 5 are permitted to fire natural gas and up to 0.3% sulfur fuel oil, and started commercial operation in May and June of 1993, respectively.

The five GE 7F.05 SCCT's (EU 046 – EU 049, and EU 053) do not have a HRSG and operate primarily for peaking purposes. Each SCCT is permitted to fire natural gas and ultra-low sulfur distillate (ULSD) fuel oil, and each SCCT has a manufacturer's net generating capability of 241 MW. NO<sub>x</sub> is controlled by the use of dry low-NO<sub>x</sub> (DLN) combustors when firing natural gas, and water injection when firing ULSD fuel oil. NO<sub>x</sub> emissions are monitored by CEMS. Emissions of CO and VOC are controlled by good combustion practices. Emissions of SO<sub>2</sub>, sulfuric acid mist (SAM), and particulate matter (PM, PM with a mean diameter of 10 microns or less (PM<sub>10</sub>) and (PM<sub>2.5</sub>) are controlled by firing pipeline quality natural gas. The Unit 6 SCCT's started commercial operation in December 2016.

Each simple-cycle gas turbines (EU 003) has a net capability of 42 MW. Regulations regarding solvent usage is also included in this permit, as well as, miscellaneous unregulated/insignificant emissions units and/or activities.

### **Subsection B. Summary of Emissions Units.**

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
035	CCCT with HRSG (CT 4A)
036	CCCT with HRSG (CT 4B)
037	CCCT with HRSG (CT 5A)
038	CCCT with HRSG (CT 5B)
003	Two Combustion Turbines
027	Fuel Oil Storage Tank #2 (80,000 barrel (bbl))
028	Fuel Oil Storage Tank #3 (150,000 bbl)
029	Fuel Oil Storage Tank #5 (75,000 bbl)
030	2 Fuel Oil Dump Tanks (2,500 gallon and 110 gallon)
039	Site Solvent Usage
042	Auxiliary Boiler (15.5 MMBtu/hr)
044	Emergency Diesel Fire Pump Engine (376 HP)
046	SCCT Unit 6B
047	SCCT Unit 6C
048	SCCT Unit 6D
049	SCCT Unit 6E
053	SCCT Unit 6A

## SECTION I. FACILITY INFORMATION.

054	Circuit Breakers
<i>Unregulated Emissions Units and Activities</i> (see Appendix U, List of Unregulated Emissions Units and/or Activities)	
041	Facility-wide Fugitive Emissions for VOC
043	Propane Fuel Storage Tank
045	Emergency Generators (Two - 18.64 HP)

### **Subsection C. Applicable Regulations.**

Based on the Title V air operation permit renewal application received March 29, 2018, this facility is 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. 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 Source Performance Standards (NSPS) General Provisions	035, 036, 037, 038, 042, 046, 047, 048, 049, 053
40 CFR 60, Subpart GG – SOP for Stationary Gas Turbines	035, 036, 037, 038
40 CFR 60, Subpart KKKK – SOP for Stationary Combustion Turbines that Commenced Construction, Modification or Reconstruction After February 18, 2005	046, 047, 048, 049, 053
40 CFR 60, Subpart TTTT – SOP for Greenhouse Gas for Electric Generating Units	046, 047, 048, 049, 053
40 CFR 63, Subpart A – NESHAP General Provisions	042, 044, 046, 047, 048, 049, 053
40 CFR 63, Subpart YYYY – NESHAP for Stationary Combustion Turbines	046, 047, 048, 049, 053
40 CFR 63, Subpart ZZZZ – NESHAP for Stationary RICE	044
40 CFR 63, Subpart DDDDD – NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters	042
40 CFR 75 Acid Rain Monitoring Provisions	035, 036, 037, 038, 046, 047, 048, 049, 053
<i>State Rule Citations</i>	
Rule 62-204.800, F.A.C. (Federal Regulations Adopted by Reference)	035, 036, 037, 038, 042, 044, 046, 047, 048, 049, 053
Rule 62-212.400, F.A.C. (PSD Preconstruction Review and Best Available Control Technology (BACT))	035, 036, 037, 038, 046, 047, 048, 049, 053, 054
Chapter 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	003, 027, 028, 030, 035, 036, 037, 038, 039, 042, 044, 046, 047, 048, 049, 053, 054
Chapter 62-214, F.A.C. (Acid Rain Program)	035, 036, 037, 038, 046, 047, 048, 049, 053
Rule 62-296.320, F.A.C. (General Pollutant Emission Limiting Standards)	003, 027, 028, 030, 039, 042,
Rule 62-296.570, F.A.C. (Reasonably Available Control Technology (RACT) Requirements for Major VOC and NOx Emitting Facilities)	003
Rule 62-297.310, F.A.C. (General Emissions Test Requirements)	003, 035, 036, 037, 038, 046, 047, 048, 049, 053

---

## 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 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:

- a. Paving of roads, parking areas and equipment yards.
- b. Landscaping and planting of vegetation.
- c. Use of containment devices to contain and capture sand in the small sandblast facility.
- d. The plant facility also constructs temporary sandblasting enclosures when necessary, in order to perform sandblasting on fixed plant equipment.
- e. Maintenance of paved areas as needed.
- f. Regular mowing of grass and care of vegetation.
- g. Limiting access to plant property by unnecessary vehicles.
- h. Bagged chemical products are stored in weather-tight buildings until they are used. Spills of powdered chemical products are cleaned up as soon as practicable

[Rule 62-296.320(4)(c), F.A.C.; and, proposed by applicant in Title V air operation permit renewal application received March 29, 2018.]

### **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.

## SECTION II. FACILITY-WIDE CONDITIONS.

---

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 1<sup>st</sup> 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:

<https://floridadep.gov/air/permitting-compliance/content/title-v-fees>. [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](mailto: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 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 60<sup>th</sup> day following the end of each calendar half (i.e., March 1<sup>st</sup> and August 29<sup>th</sup> of every year). All instances of deviations from permit requirements (including conditions in the referenced

---

## SECTION II. FACILITY-WIDE CONDITIONS.

---

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, 40 CFR 61.10 & 40 CFR 63.10]

*{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. VOC Emissions CAP.** The total VOC emissions from all emissions units at this facility (with the exception of Unit 6 (EU 046 – EU 049, and EU 053) and the two combined-cycle units, Unit 4 and Unit 5 (EU 035 – EU 038) shall not exceed 99.92 tons per year (TPY). [Permit Nos. AC06-179848, AO06-230614 & 0110037-018-AC]



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 035, 036, 037, 038

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

EU No.	Brief Description
035	CCCT with HRSG (CT 4A)
036	CCCT with HRSG (CT 4B)
037	CCCT with HRSG (CT 5A)
038	CCCT with HRSG (CT 5B)

The four CCCT are identical in configuration. Each CT is connected to an electrical generator, and each CT generates heat which produces steam in a HRSG. The steam from two HRSG units is then sent to a steam turbine generator for additional electrical power. The combined CT 4A and CT 4B units are designated as Unit 4; in like manner, the combined CT 5A and CT 5B units are designated as Unit 5. Unit 4 and Unit 5 each have a net summer continuous capability of 430 MW. NO<sub>x</sub> emissions are controlled by using steam injection. Duct modules, suitable for later installation of selective catalytic reduction equipment, have been installed. Unit 4 commenced commercial operation in May 1993; Unit 5 commenced commercial operation in June 1993. Both Unit 4 and Unit 5 have dual stacks with a height of 150 feet.

*{Permitting Note: These emissions units are regulated under Acid Rain, Phase II; NSPS Subpart A, General Provisions, and Subpart GG, Standards of Performance for Stationary Gas Turbines, of 40 CFR 60, adopted and incorporated by reference in Rule 62-204.800(8)(b)42, F.A.C.; and Rule 62-212.400(BACT), F.A.C., PSD.}*

#### **Essential Potential to Emit (PTE) Parameters**

**A.1. Permitted Capacity.** The maximum operation heat input rate of each CCCT is as follows:

<u>Unit Nos.</u>	<u>MMBtu/hr Heat Input (lower heating value (LHV) at 75°F)</u>	<u>Fuel Type</u>
035 - 038	1,775.62	Natural Gas
	1,646.9	Fuel Oil

The maximum operation heat input rate is limited for EU 035 – EU 038 in accordance with a 3-hour block average that is limited at any given ambient temperature. The ambient temperature for heat input calculation or look up curves is equivalent to the compressor inlet temperature. The heat input will be demonstrated annually in accordance with the 3-hour run time of the performance test and will be provided as a part of the test submittal. The CEMS Data Handling and Acquisition System (DHAS) calculated heat input shall not be used for compliance purposes.

Heat input is not required to be recorded other than the instances as addressed previously in this condition or as specified in Specific Condition A.23.

[Rules 62-4.160(2), 62-204.800, 62-210.200(PTE), F.A.C.; and, PSD-FL-145.]

*{Permitting Note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100% of the unit's rated capacity (or to limit future operation to 110% of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. An estimated "real time" heat input value can be calculated for agency compliance inspectors upon request. The averaging time for the estimated heat input will be a 3-hour block that may utilize fuel flow or tank drop data to determine the fuel usage which will be multiplied by the last available heating value of the fuel. If sampling is needed to determine the current heat input value, the adjusted heat input value will be provided to the inspector after test results are received for the heat value of the fuel and a corrected fuel heat input is calculated.}*

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 035, 036, 037, 038

- A.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(3), F.A.C.]
- A.3. Methods of Operation - Fuels.** The fuels that are allowed to be burned in these units are only natural gas or light distillate fuel oil. [Rules 62-212.400 and 62-213.410, F.A.C.; and PSD-FL-145]
- A.4. Hours of Operation.** These emissions units are allowed to operate continuously, i.e., 8,760 hours/year, provided that the annual heat input (LHV) to the four CT units does not exceed 54,129,421 MMBtu and the annual heat input attributed to light distillate fuel oil firing does not exceed 14,426,844 MMBtu at 75 degrees Fahrenheit (°F). [Rules 62-210.200(PTE) and 62-212.400, F.A.C.; and PSD-FL-145]

#### Control Technology

- A.5. Steam Injection.** The NO<sub>x</sub> emissions from each combustion turbine unit shall be controlled by using steam injection for both natural gas and fuel oil firing modes. [Rule 62-212.400(BACT), F.A.C.; and PSD-FL-145]

#### Emission Limitations and Standards

Unless otherwise specified, the averaging time(s) for Specific Condition **A.6– A.11** based on the specified averaging time of the applicable test method.

- A.6. NO<sub>x</sub> Emissions.** As determined by CEMS, the maximum allowable emissions from each CT, shall not exceed the following emissions, at 75°F. A 4-hour rolling average shall be used for demonstrating continuous compliance:
- Natural Gas:* 264 lb/hour/CT, based on 42 parts per million by volume, dry (ppmvd) corrected to International Organization for Standardization (ISO) standard ambient air conditions and 15% oxygen (O<sub>2</sub>). (BACT)
  - Oil:* 422 lb/hour/CT, based on 65 ppmvd corrected to ISO conditions at 15% O<sub>2</sub>. (BACT)
  - Combined Gas and Oil Total:* 4,868 TPY. {*Permitting Note: Refers to the maximum facility emissions (four CTs), with capacity limitations of 25% on oil.*} (BACT)
  - All fuels - NSPS:*

$$STD = 0.0075 \frac{(14.4)}{y} + F$$

where:

STD = Allowable ISO corrected (if required as given in 40 CFR 60.335(b)(1)) NO<sub>x</sub> emission concentration (percent by volume at 15% O<sub>2</sub> and on a dry basis),

Y = Manufacturer's rated heat rate at manufacturer's rated load (kilojoules/watt hour) or, actual measured heat rate based on LHV of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules/watt hour, and

F = NO<sub>x</sub> emission allowance for fuel-bound nitrogen as defined in 40 CFR 60.332(a)(4).

[Rules 62-204.800(8)(b)42 and 62-212.400(BACT), F.A.C.; 40 CFR 60.332(a)(1); and Permit Nos. PSD-FL-145 & 0110037-018-AC]

- A.7. VOC Emissions.** As determined by stack test, the maximum allowable emissions from each CT shall not exceed the following emissions, at 75°F:
- Natural Gas:* 1.3 lb/hour/CT, based on 1 ppmvd.
  - Oil:* 7.8 lb/hour/CT, based on 6 ppmvd.
  - Combined Gas and Oil Total:* 50 TPY. {*Permitting Note: Refers to the maximum facility emissions (four CTs), with capacity limitations of 25% on oil.*}
- [Rule 62-212.400(BACT), F.A.C.; and PSD-FL-145]

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection A. Emissions Units 035, 036, 037, 038

- A.8. CO Emissions.** As determined by stack test, the maximum allowable emissions from each CT shall not exceed the following emissions, at 75°F:
- Natural Gas:* 89 lb/hour/CT, based on 30 ppmvd.
  - Oil:* 100 lb/hour/CT, based on 33 ppmvd.
  - Combined Gas and Oil Total:* 1,489 TPY. *{Permitting Note: Refers to the maximum facility emissions (four CTs), with capacity limitations of 25% on oil.}*  
[Rule 62-212.400(BACT), F.A.C.; and PSD-FL-145]
- A.9. PM/PM<sub>10</sub> Emissions.** As determined by stack tests, the maximum allowable emissions from each CT shall not exceed the following emissions, at 75°F:
- Natural Gas:* 14.7 lb/hour/CT.
  - Oil:* 58.0 lb/hour/CT.
  - Combined Gas and Oil Total:* 424.7 TPY. *{Permitting Note: Refers to the maximum facility emissions (four CTs), with capacity limitations of 25% on oil.}*  
[Rule 62-212.400(BACT), F.A.C.; and PSD-FL-145]
- A.10. SO<sub>2</sub> Emissions.** As determined by fuel analysis, the maximum allowable emissions from each CT shall not exceed the following emissions:
- Natural Gas:* 4.9 lb/hour/CT at 75°F. (BACT)
  - Oil:* 538.0 lb/hour/CT at 75°F. (BACT)
  - Combined Gas and Oil Total:* 1,582.8 TPY at 75°F. *{Permitting Note: Refers to the maximum facility emissions (four CTs), with capacity limitations of 25% on oil.}* (BACT)
  - Sulfur Content of Natural Gas:* The maximum allowable sulfur (total) content of the natural gas burned at this facility shall not exceed 10 grains per 1,000 cubic feet (gr/1000 cf). The permittee shall monitor the sulfur content of the natural gas by the customized fuel monitoring schedule approved by EPA. *{Permitting Note: As modified by EPA by letter (June 1993); and Customized Fuel Monitoring Schedule, dated March 12, 1993.}*
  - Sulfur Content of Fuel Oil:* The sulfur content of the light distillate fuel oil shall not exceed a maximum of 0.3%, by weight, and shall not exceed an average of 0.2%, by weight, during any consecutive 12-month period. The 12-month average sulfur content shall be calculated as a weighted average based upon the sulfur content of the oil and the amount burned on a daily basis. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60.335 by testing all oil shipments for sulfur content, nitrogen content, and heating value, using ASTM D 2800-96 or the latest edition. *{Permitting Note: Applicant agreement with EPA on March 3, 1998.}*
  - All Fuels – NSPS:* The sulfur content of any fuel shall not exceed a maximum of 0.8%, by weight.  
[Rules 62-204.800(8)(b)42, 62-212.400(BACT) & 62-213.440, F.A.C.; 40 CFR 60.333(2); and PSD-FL-145]
- A.11. Visible Emissions.** Visible emissions shall neither exceed 10% opacity while burning natural gas, nor exceed 20% opacity while burning distillate oil. [Rule 62-212.400(BACT), F.A.C.; and PSD-FL-145]

#### Excess Emissions

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

- A.12. Excess Emissions Allowed.** As specified in this condition, excess emissions resulting from startup, shutdown, fuel switches and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. For each CT/HRSG system, excess emissions of NO<sub>x</sub> resulting from startup, shutdown, or documented malfunctions may be excluded from the CEMS data in any 24-hour period (“any 24-hour period” means a calendar day, midnight to midnight) for the following conditions (these conditions are considered separate events and each event may occur independently within any 24-hour period):

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 035, 036, 037, 038

- a. *Steam Turbine Cold Startup.* For cold startup of the steam turbine, excluded emissions from any CT/HRSG system shall not exceed three hours in any 24-hour period and shall not exceed five hours total for both CT/HRSG systems during the entire Steam Turbine Cold Startup event. A “cold startup of the steam turbine” is defined as startup of system when the steam turbine high pressure metal temperature is below 250°F. *{Permitting Note: During a cold startup of the steam turbine, each CT/HRSG system may be sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine to prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}*
- b. *CT/HRSG System Cold Startup.* For cold startup of an individual CT/HRSG system, excluded emissions shall not exceed three hours in any 24-hour period. A “cold startup of a CT/HRSG system” is defined as a startup of the system when the pressure in the high-pressure steam drum is below 600 pounds per square inch gauge (psig).
- c. *CT/HRSG System Hot Startup.* For hot startup of a CT/HRSG system, excluded emissions shall not exceed two hours in any 24-hour period (and shall not exceed six hours per 2-on-1 Combined Cycle System, with the additional provision of a limit of two hot startup periods per 24 hours per CT/HRSG system). A “hot startup of a CT/HRSG system” is defined as a startup when the pressure in the high-pressure steam drum is above 600 psig.
- d. *Shutdown Combined Cycle Operation.* For shutdown of the entire 2-on-1 combined cycle system operation, excluded emissions from any CT/HRSG system shall not exceed two hours in any 24-hour period.
- e. *CT/HRSG System Shutdown.* For shutdown of the CT/HRSG systems operation, excluded emissions from any CT/HRSG system shall not exceed one hour in any 24-hour period.
- f. *Fuel Switching:* For fuel switching, excluded emissions shall not exceed one hour in any 24-hour period for each fuel switch and no more than two hours in any 24-hour period for any CT/HRSG system.
- g. *Documented Malfunction.* For the CT/HRSG system, excess emissions of NO<sub>x</sub> resulting from documented malfunctions shall not exceed two hours in any 24-hour period. A “documented malfunction” means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail.

[Rules 62-4.070, 62-210.700(1) & (5), F.A.C.; and, Permit No. 0110037-009-AC]

**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.]

**A.14. Excess Emissions – NSPS.**

- a. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- b. For turbines using NO<sub>x</sub> CEMS:
  - (1) An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the applicable emission limit in Specific Condition **A.6.d**. For the purposes of this subpart, a “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three-unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour.
  - (2) A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both).

---

## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

### Subsection A. Emissions Units 035, 036, 037, 038

- (3) Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1).

[Rule 62-204.800(8)(b)42, F.A.C.; and 40 CFR 60.11(d) and 60.334(j)(1)(iii)] *{Permitting Note: NSPS excess emissions only applies when demonstrating compliance with the NSPS Subpart GG emissions limits contained in Appendix NSPS, Subpart GG.}*

#### **Monitoring of Operations**

**A.15. Fuel Monitoring.** The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as specified in 40 CFR 60.334. Note that the Lauderdale Plant has an approved Customized Fuel Monitoring Schedule (dated March 12, 1993. See Appendix CFMS, Customized Fuel Monitoring Schedule). [Rule 62-204.800(8)(b)42, F.A.C.; and 40 CFR 60.334]

#### **Continuous Emissions Monitoring Requirements**

**A.16. NO<sub>x</sub> CEMS Requirements.** The permittee shall certify, maintain, operate, and quality-assure a CEMS consisting of NO<sub>x</sub> and carbon dioxide (CO<sub>2</sub>) monitors. The CO<sub>2</sub> monitor may be used to adjust the measured NO<sub>x</sub> concentrations to 15% O<sub>2</sub> by either converting the CO<sub>2</sub> hourly averages to equivalent O<sub>2</sub> concentrations using Equation F-14a or F-14b in Appendix F of 40 CFR 75 and making the adjustments to 15% O<sub>2</sub>, or by using the CO<sub>2</sub> readings directly to make the adjustments, as described in Method 20. The CEMS shall be installed, certified, maintained and operated as follows:

- a. Each CEMS must be installed and certified according to PS 2 and 3 (for diluent) of 40 CFR 60, Appendix B, except the 7-day calibration drift is based on unit operating days, not calendar days. Appendix F, Procedure 1 is not required. The relative accuracy test audit (RATA) of the NO<sub>x</sub> and diluent monitors may be performed individually or on a combined basis, i.e., the relative accuracy tests of the CEMS may be performed on a ppm basis (for NO<sub>x</sub>) and a percent CO<sub>2</sub> basis (for a CO<sub>2</sub> monitor that uses the procedures in Method 20 to correct the NO<sub>x</sub> data to 15% O<sub>2</sub>).
- b. As specified in 40 CFR 60.13(e)(2), during each full unit operating hour, each monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required to validate the hour.
- c. For purposes of identifying excess emissions, CEMS data must be reduced to hourly averages as specified in 40 CFR 60.13(h).
  - (1) For each unit operating hour in which a valid hourly average, as described in paragraph **b** above, is obtained for both NO<sub>x</sub> and diluent, the data acquisition and handling system must calculate and record the hourly NO<sub>x</sub> emissions in the units of the applicable NO<sub>x</sub> emission standard under 40 CFR 60.332(a), i.e., percent NO<sub>x</sub> by volume, dry basis, corrected to 15% O<sub>2</sub> and ISO standard conditions (if required as given in 40 CFR 60.335(b)(1)). For any hour in which the hourly average O<sub>2</sub> concentration exceeds 19.0% O<sub>2</sub>, a diluent cap value of 19.0% O<sub>2</sub> may be used in the emission calculations.
  - (2) A worst-case ISO correction factor may be calculated and applied using historical ambient data. For the purpose of this calculation, substitute the maximum humidity of ambient air (H<sub>o</sub>), minimum ambient temperature (T<sub>a</sub>), and minimum combustor inlet absolute pressure (P<sub>o</sub>) into the ISO correction equation.

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 035, 036, 037, 038

- (3) If the owner or operator has installed a NO<sub>x</sub> CEMS to meet the requirements of 40 CFR 75, and is continuing to meet the ongoing requirements of 40 CFR 75, the CEMS may be used to meet the requirements of 40 CFR Subpart GG, except that the missing data substitution methodology provided for at 40 CFR 75, Subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c).
- d. The NO<sub>x</sub> CEMS is subject to the monitoring requirements of 40 CFR 60.13. See Appendix NSPS Subpart A, General Provisions. Note that the installed NO<sub>x</sub> monitors used for compliance purposes be calibrated and maintained according to 40 CFR 75 as an acceptable alternative to 40 CFR 60.13 requirements.

[Rule 62-204.800(8)(b)42, F.A.C.; 40 CFR 60.334; and Permit No. 0110037-006-AC (PSD-FL-145B)]

#### **Test Methods and Procedures**

*{Permitting Note: The attached Table 2, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}*

**A.17. Test Methods.** When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
3A	Determination of O <sub>2</sub> and Carbon Dioxide Concentrations in Emissions from Stationary Sources
5B	Method for Determining PM Emissions (All PM is assumed to be PM <sub>10</sub> .)
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of CO Emissions from Stationary Sources <i>{Note: The method shall be based on a continuous sampling train.}</i>
17	Determination of PM Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
19	Determination of SO <sub>2</sub> Removal Efficiency and PM, SO <sub>2</sub> , and NO <sub>x</sub> Emission Rates (Optional F-factor method may be used to determine flow rate and gas analysis to calculate mass emissions in lieu of Methods 1-4.)
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
ASTM D 2880-96	Sulfur content of fuel oil. <i>{Note: The latest edition may be used.}</i>
ASTM D 1072- 90(94) E-1, ASTM D 3031- 81(86), ASTM D 4084-94, or ASTM D 3246-92*	Sulfur content of natural gas. <i>{Note: The latest edition may be used.}</i>

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-204.800, F.A.C., and Permit No. 0110037-006-AC (PSD-FL-145B)]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection A. Emissions Units 035, 036, 037, 038

- A.18. 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.19. Annual Compliance Tests Required.** During each calendar year (January 1<sup>st</sup> to December 31<sup>st</sup>), each emission unit shall be tested to demonstrate compliance with the emissions standards for PM and CO. Compliance with the emissions standard for visible emissions shall be demonstrated as specified in Specific Condition **A.21**. Annual compliance tests for these pollutants shall be performed on each unit that burns oil for 400 hours or more during the calendar year. Unless specifically requested by the Compliance Authority pursuant to Rule 62-297.310(7)(b), F.A.C., periodic opacity tests are not required when firing natural gas. [Rule 62-297.310(8), F.A.C.; applicant agreement with EPA on March 3, 1998; and Permit Nos. PSD-FL-145 & 0110037-018-AC (PSD-FL-145D)]
- A.20. Compliance Tests Prior To Renewal.** Except as provided in subparagraph 62-297.310(8)(b)3., F.A.C. (see condition **TR7.b.(3)** in Appendix TR – Facility-wide Testing Requirements), in addition to the annual compliance tests specified above, compliance tests shall also be performed for visible emissions, PM, CO and VOC prior to obtaining a renewed operation permit to demonstrate compliance with the emission limits in Specific Condition **A.6** through **A.11**. *{Permitting Note: Tests which are only required once during the term of a permit prior to obtaining a renewed permit should be performed roughly five years from the previous test.}* [Rules 62-210.300(2)(a) and 62-297.310(8)(b), F.A.C., and Permit No. 0110037-006-AC (PSD-FL-145B)]
- A.21. Visible Emissions Testing Requirements.**
- Natural Gas.** Except as specified in this condition for visible emissions testing on fuel oil, annual compliance tests shall be performed on each combustion turbine unit with the fuels used (i.e., natural gas or light distillate fuel oil) for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with 40 CFR 60 Appendix A.
  - Fuel Oil.** The owner or operator shall conduct testing for visible emissions while firing fuel oil, using EPA Method 9, for each combustion turbine unit upon that turbine's exceeding 400 hours of operation on fuel oil, and every 150 hours of operation on fuel oil thereafter, in any given federal fiscal year (October 1 through September 30). Such tests shall be performed within 15 days of exceeding such operating hours, to allow for prior notification of the tests.  
[Rule 62-213.440, F.A.C.; applicant agreement with EPA on March 3, 1998; and PSD-FL-145]
- A.22. NO<sub>x</sub> CEMS.** The existing NO<sub>x</sub> CEMS shall be used to demonstrate compliance with the emissions limits for NO<sub>x</sub>, based on the parts per million, as specified in Specific Condition **A.6**. A 4-hour rolling average shall be used for demonstrating continuous compliance. Compliance with the lb/hour NO<sub>x</sub> limitations, as specified in Specific Condition **A.6**, shall be demonstrated by using RATA data from the annual CEMS certifications. [Rule 62-204.800(8)(b)42, F.A.C.; 40 CFR 60.334(b); and, Permit No. 0110037-018-AC (PSD-FL-145C)]

#### **Recordkeeping and Reporting Requirements**

- A.23. Heat Input Compliance Records.** To determine compliance with the heat input limitations, the permittee shall maintain daily records of fuel consumption for each turbine and monthly records of heating value for each fuel fired. All records shall be maintained for a minimum of 5-years after the date of each record and shall be made available to representatives of the Department upon request. [Rule 62-213.440, F.A.C. and PSD-FL-145]
- A.24. Reporting Schedule.** The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Condition(s)
Notice of Excess Emissions	Semi-Annual.	<b>A.25</b>

---

**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

---

**Subsection A. Emissions Units 035, 036, 037, 038**

<b>Report</b>	<b>Reporting Deadline</b>	<b>Related Condition(s)</b>
Notice of Malfunctions	Quarterly, by request.	<b>A.26</b>

[Rule 62-213.440(1)(b), F.A.C.]

**A.25. Semi-Annual Excess Emission Reports.** Semi-annual excess emission reports, in accordance with 40 CFR 60.7 and 60.334, shall be submitted to the Broward County Environmental Protection and Growth Management Department. [Permit No. 0110037-018-AC (PSD-FL-145C)]

**A.26. Malfunction Reporting.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(5), F.A.C.]

**Other Requirements**

**A.27. NSPS Provisions.** Each combustion turbine is subject to the NSPS applicable requirements in 40 CFR 60, Subpart A, General Provisions and Subpart GG, Stationary Gas Turbines. These provisions are included in the attached NSPS Appendices of this permit. [Rule 62-204.800(8)(b)42, F.A.C. and 40 CFR 60, NSPS Subparts A and GG]

**A.28. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

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

EU No.	Brief Description
046	SCCT Unit 6B
047	SCCT Unit 6C
048	SCCT Unit 6D
049	SCCT Unit 6E
053	SCCT Unit 6A

The five SCCT's are GE Model 7F.05 turbines which utilize inlet air cooling and wet compression. These operate primarily for peaking purposes, but may also operate as needed for power generation. Each SCCT is permitted to fire natural gas and ULSD fuel oil, and each CT has a manufacturer's net generating capability of 241 MW. The maximum design heat input rate for each CT is 2,089.1 MMBtu/hr when firing natural gas and 2,211.3 MMBtu/hr when firing fuel oil, based on a compressor inlet air temperature of 59°F, evaporative cooling and wet compression, 60% relative humidity, 14.7 psi pressure, the LHV of each fuel and 100% load. *{Permitting Note: Actual heat input rate varies depending upon gas turbine characteristics, ambient conditions and inlet air cooling.}*

NO<sub>x</sub> is controlled by the use of DLN combustors when firing natural gas, and water injection when firing ULSD fuel oil. NO<sub>x</sub> is monitored by CEMS. Emissions of CO and VOC are controlled by good combustion practices. Emissions of SO<sub>2</sub>, SAM, and PM/PM<sub>10</sub>/PM<sub>2.5</sub> are controlled by firing pipeline quality natural gas. Each unit has a separate 23-foot diameter, 87-foot-tall stack with a flow rate of 2,866,864 actual cubic feet per minute. The Unit 6 simple-cycle CT's started commercial operation in December 2016.

*{Permitting Note: These emissions units are regulated under Acid Rain, Phase II; NSPS Subpart A, General Provisions, and Subpart KKKK, Standards of Performance for Stationary Gas Turbines, of 40 CFR 60, adopted and incorporated by reference in Rule 62 204.800(8)(b)84, F.A.C.; NESHAP Subpart A, General Provisions, and Subpart YYYY, NESHAP for Stationary Combustion Turbines, adopted and incorporated by reference in Rule 62 204.800(11)(b)81, F.A.C.; and Rule 12.400(BACT), F.A.C., PSD, BACT for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, SAM and greenhouse gases (GHG).}*

#### **Essential Potential to Emit (PTE) Parameters**

**B.1. Permitted Capacity.** The maximum design heat input rate of each SCCT is as follows:

Unit No.	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
6A – 6D	2,089.1	Natural Gas	2,211.3	ULSD Fuel Oil

The maximum design heat input rates are based on a compressor inlet temperature of 59°F, evaporative cooling and wet compression, 60% relative humidity, 14.7 psi pressure, the LHV of each fuel and 100% load. The maximum heat input rates will vary depending upon site conditions and the combustion turbine characteristics, ambient conditions, and inlet air cooling. Manufacturer's curves corrected for site conditions were provided to the Department with the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rules 62-4.160(2), 62-204.800, 62-210.200(PTE), & 62-214.330, F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

*{Permitting Note: The design heat input rates have been placed in the permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted at the testing capacity, which is*

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

*defined as at least 90% of the unit's rated capacity listed above, adjusted for site conditions, as well as to establish appropriate emission limits and aid in determining future rule applicability.}*

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(3), F.A.C.]

**B.3. Methods of Operation.**

- a. *Fuels.* The CTs shall fire natural gas as the primary fuel, which shall contain no more than 2 gr. sulfur/100 scf of natural gas. As a restricted alternate fuel, the combustion turbines may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight.
- b. *Other.* The turbines shall operate only in simple cycle mode not to exceed the permitted hours of operation allowed by this permit (see Specific Condition **B.4.**). This restriction is based on the permittee's request, which formed the basis of the PSD applicability and BACT determination and resulted in the emission standards specified in this permit. For any request to convert this unit to combined cycle operation by installing/connecting to HRSG, including changes to the fuel quality or quantity related to combined cycle conversion which may cause an increase in short or long-term emissions, the permittee may be required to submit a full PSD permit application complete with a new proposal of the BACT as if the unit had never been built.

[Rules 62-210.200(PTE), 62-212.400(BACT), & 62-213.410, F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A).]

**B.4. Hours of Operation.**

- a. *Natural Gas Operation:* The five CTs may operate an average of no more than a total of 3,390 hours per turbine in any consecutive 12-month period.
- b. *ULSD Fuel Oil Operation.* Of the overall average 3,390 operational hours, each CT may operate on ULSD fuel oil as needed, provided the permittee does not exceed a NO<sub>x</sub> emission cap of 1,009 tons per 12-consecutive month period across the five CT's. Compliance with the NO<sub>x</sub> emission cap shall be demonstrated on a 12-month rolled monthly basis using CEMS.

[Rules 62-210.200(PTE) & 62-212.400(BACT), F.A.C.; and, Permit Nos. 0110037-013-AC (PSD-FL-423A) and 0110037-015-AC(PSD-FL-423B)]

#### **Control Technology**

**B.5. Combustion Technology:** The permittee shall operate and maintain the DLN combustion system or its equivalent with a start-up NO<sub>x</sub> technology on each CT to control NO<sub>x</sub> emissions from the CT when firing natural gas. The system shall be maintained and tuned in accordance with the manufacturer's recommendations or determined best practices. [Rule 62-212.400(BACT), F.A.C. and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.6. Wet Injection:** The permittee shall operate and maintain a water injection system with combustion control technology to reduce NO<sub>x</sub> emissions (including startup emissions) from the CT when firing ULSD fuel oil. The system shall be maintained and tuned in accordance with the manufacturer's recommendations or determined best practices. [Rule 62-212.400(BACT), F.A.C. and, Permit No. 0110037-013-AC (PSD-FL-423A)]

#### **Emission Limitations and Standards**

Unless otherwise specified, the averaging time(s) for Specific Conditions **B.7.** - **B.9.** are based on the specified averaging time of the applicable test method.

# SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

## Subsection B. Emissions Units 046, 047, 048, 049, 053

**B.7. Emissions Standards:** Emissions from each CT shall not exceed the following standards:

Pollutant		Emission Standard <sup>a,b</sup>	Basis	Compliance Method <sup>c</sup>	Averaging Time
NO <sub>x</sub>	Gas	15.0 ppmvd @15% O <sub>2</sub> (for turbine loads ≥ 75%)	NSPS KKKK, Secondary BACT <sup>d</sup>	CEMS	4-hr rolling avg. <sup>e</sup>
		9.0 ppmvd @15% O <sub>2</sub>	Primary BACT (Normal operating conditions)		24-hr block avg.
		73.8 lb/hour <sup>f</sup>			One 24-hr block <sup>f</sup>
	Oil	42.0 ppmvd @15% O <sub>2</sub>	Primary BACT		4-hr rolling avg. <sup>e</sup>
		382.0 lb/hour <sup>f</sup>	BACT		One 24-hr block <sup>f</sup>
	Gas or oil	96.0 ppmvd @15% O <sub>2</sub> (for turbine loads < 75%)	NSPS KKKK, Secondary BACT <sup>d</sup>		4-hr rolling avg. <sup>e</sup>
CO	Gas	4.0 ppmvd @15% O <sub>2</sub>	BACT	Initial and Annual Stack Tests	Three 1-hr runs
		20.0 lb/hour			
	Oil	9 ppmvd @15% O <sub>2</sub>			
		49.6 lb/hour			
PM/PM <sub>10</sub> /PM <sub>2.5</sub> <sup>f</sup>		2.0 gr. sulfur/100 SCF natural gas 0.0015% sulfur fuel oil	BACT	Fuel Recordkeeping	N/A
		10 percent opacity		Visible Emissions Annual Test <sup>h</sup>	6-minute block
SO <sub>2</sub> and SAM <sup>g</sup>		2.0 gr. sulfur/100 SCF natural gas 0.0015% sulfur fuel oil	BACT	Fuel Recordkeeping	N/A
GHGs	Gas	1,372 lb CO <sub>2</sub> e/MWh	BACT	Fuel-use monitoring or CEMS <sup>i</sup> (40 CFR 75)	12-month or 36-month rolling avg. <sup>j</sup>
	Oil	1,871 lb CO <sub>2</sub> e/MWh			
VOC	Gas	3.4 lb/hour	Reasonable Assurance	Stack Tests: Initial and prior to operating permit renewal	Three 1-hr runs
	Oil	8.4 lb/hour			
<p>a. NO<sub>x</sub> and CO concentration emission standards are expressed in parts per million by volume, dry, corrected to 15 percent oxygen, abbreviated as ppmvd @ 15% O<sub>2</sub>; CO emissions at loads below 90%, but above the load at which compliance with NO<sub>x</sub> emission limits are achieved, shall not exceed 29 lb/hr when firing natural gas and 62 lb/hr when firing ULSD oil. Compliance with the CO emissions standards in lb/hr at loads below 90%, shall be demonstrated through initial stack testing only.</p> <p>b. The mass emission rate standards in pounds per hour (lb/hour) are based on a turbine inlet condition of 59 °F and using evaporative cooling and wet compression and the higher heating value (HHV) of the fuel.</p> <p>c. CEMS means continuous emissions monitoring system.</p> <p>d. Secondary BACT emission limits are alternative emission limits for specified modes of operation, pursuant to Specific Conditions <b>B.12.</b> and <b>B.13.</b>. Demonstrating compliance with the NSPS Subpart KKKK limit for NO<sub>x</sub> shall be sufficient for demonstrating compliance with the Secondary NO<sub>x</sub> BACT limit.</p> <p>e. The composite NSPS KKKK NO<sub>x</sub> emission limit for periods during which multiple NO<sub>x</sub> emission standards apply shall be determined in accordance with 40 CFR 60.4380(b)(3).</p> <p>f. One-time initial compliance demonstration by CEMS. Subject to the notification requirements in 62-297.310(7)(a)9., F.A.C. The demonstration period shall include all valid hours within the designated 24-hour block and not less than three valid hours during the block. Pound/hour NO<sub>x</sub> values reported as NO<sub>2</sub> equivalent of nitrous oxide (NO) plus nitrogen dioxide (NO<sub>2</sub>). Subsequent annual testing is not required.</p>					

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

- g. The fuel sulfur specifications combined with the efficient combustion design and operation of the combustion turbines represent BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> and SO<sub>2</sub> emissions. Compliance with the fuel specifications, CO standards, and visible emissions (opacity) limit shall serve as indicators of good combustion.
- h. Compliance with the 10% opacity standard shall be demonstrated by conducting 30-minute tests in accordance with EPA Method 9 - Visual Determination of Opacity, at normal operating conditions. Visible emissions when firing natural gas during startups, shutdowns, fuel switches and malfunctions shall not exceed 10% opacity, except for up to six 6-minute average periods during a calendar day, which shall not exceed 20% opacity. Visible emissions when firing ULSD fuel oil during startups and shutdowns shall be minimized by following the manufacturer's best practices and good combustion practices for minimizing emissions.
- i. GHG monitoring shall be in accordance with 40 CFR 75, which includes options for continuous monitoring of fuel use combined with the use of emissions factors for GHGs, or the use of a continuous emissions monitor for CO<sub>2</sub>. Calculations of CO<sub>2e</sub> emissions shall use the 100-year global warming potential values listed in Table A-1 to Subpart A of 40 CFR 98 (e.g. 1 for CO<sub>2</sub>, 25 for CH<sub>4</sub> and 298 for N<sub>2</sub>O). *{Permitting Note: The facility currently uses fuel use monitoring option.}*
- j. The GHG limit applies during all periods of operation. For the first 36 months after the completion of commissioning and testing on each fuel, the five turbines will be considered collectively as one unit for GHG compliance, to demonstrate compliance on a 12-month rolling average basis, rolled monthly. Thereafter, each individual turbine shall be subject to the GHG emission limit on a 36-month rolling average basis, rolled monthly. *{Permitting note: During the 37<sup>th</sup> through 71<sup>st</sup> months of operation, information from some of the initial 36 months of operation will be part of the 36-month compliance periods.}*

[Rules 62-4.070(3), 62-204.800(8)(b)84, 62-210.200, 62-212.400, 62-297, F.A.C.; 40 CFR 60.4320 and 60.4330; and, Permit Nos. 0110037-013-AC (PSD-FL-423A) & 018-AC (PSD-FL-423C)]

- B.8. Composite GHG Standard:** The composite GHG standard with which the permittee is required to show compliance consists of a weighted average of the natural gas and ULSD standards, weighted by the generation from each fuel over the appropriate compliance period:

$$\text{Composite Standard} = \frac{MWh_{\text{gas}}}{\text{Total MWh}} \times \text{Limit}_{\text{gas}} + \frac{MWh_{\text{ULSD}}}{\text{Total MWh}} \times \text{Limit}_{\text{ULSD}}$$

Where:

MWh<sub>gas</sub> = Gross output from gas firing for compliance period,

MWh<sub>ULSD</sub> = Gross output from ULSD firing for compliance period,

Total MWh = Total gross output for compliance period = MWh<sub>gas</sub> + MWh<sub>ULSD</sub>

Limit<sub>gas</sub> = GHG BACT limit for natural gas operation = 1,372 lb CO<sub>2</sub> / MWh, and

Limit<sub>ULSD</sub> = GHG BACT limit for ULSD operation = 1,871 lb CO<sub>2</sub> / MWh.

For the first 36 months after the completion of commissioning and testing on each fuel, the five turbines will be considered collectively as one unit for GHG compliance, to demonstrate compliance on a 12-month rolling average basis, rolled monthly. Thereafter, each individual turbine shall be subject to the GHG emission limit on a 36-month rolling average basis, rolled monthly. *{Permitting note: During the 37<sup>th</sup> through 71<sup>st</sup> months of operation, information from some of the initial 36 months of operation are included as part of the 36-month rolling compliance periods.}* [Rule 62-212.400(BACT), F.A.C.; and Permit No. 0110037-013-AC (PSD-FL-423A)]

- B.9. Formaldehyde Emissions Standard.** These units shall comply with the applicable NESHAP in 40 CFR 63, including: Subpart A (General Provisions) and Subpart YYYY (NESHAP for Stationary Combustion Turbines – See Appendices NESHAP Subpart A and YYYY of this permit). This NESHAP provision has a maximum achievable control technology (MACT) limit of 91 parts per billion by volume dry (ppbvd) corrected to 15% O<sub>2</sub>, i.e., 91 ppbvd @ 15% O<sub>2</sub>, for formaldehyde (CH<sub>2</sub>O). This emission limit of Subpart YYYY shall apply if the facility exceeds 1,000 turbine fired hours on fuel oil cumulatively in any one year. Some separate reporting and monitoring may be required by the individual subparts. [Rule 62-204.800(11)(b)81, F.A.C.; and NESHAP 40 CFR 63, Subparts A and YYYY]

#### Excess Emissions

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

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

program provision. *{Permitting Note: The following conditions apply to the State Implementation Plan (SIP)-based BACT emissions standards in Specific Condition B.8.}*

**B.10. Definitions:**

- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
- b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.
- c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200, F.A.C.]

**B.11. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

**B.12. Excess Emissions – Primary NO<sub>x</sub> BACT.** The Primary NO<sub>x</sub> BACT limit applies at all times, except during the following operating conditions:

- a. *Startup and Shutdown:* The Primary NO<sub>x</sub> BACT emission limit does not apply for up to 60 minutes for each combustion turbine startup and shutdown cycle. For startups and shutdowns of less than 60 minutes in duration, the Primary NO<sub>x</sub> BACT emission limit applies during those minutes not attributable to startup or shutdown.
- b. *Malfunction:* The Primary NO<sub>x</sub> BACT emission limit does not apply for up to 120 minutes (in any operating day) due to a documented malfunction. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic email. The permittee shall report to the Department the nature, extent, and duration of the malfunction; the cause of the malfunction; and the actions taken to correct the problem.
- c. *DLN Tuning:* The Primary NO<sub>x</sub> BACT emission limit does not apply during initial or other DLN tuning sessions provided the tuning session is performed in accordance with the manufacturer's specifications or determined best practices. Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Rule 62-4.070(3), F.A.C.]
- d. *Fuel Switching:* The Primary NO<sub>x</sub> BACT emission limit does not apply for up to 60 minutes for each fuel switch. For fuel switches of less than 60 minutes in duration, the Primary NO<sub>x</sub> BACT emission limit applies during those minutes not attributable to fuel switching.

Data from the NO<sub>x</sub> CEMS collected during the operating conditions described above will be used to demonstrate compliance with the Secondary NO<sub>x</sub> BACT emission limits at all times, as described in Specific Conditions **B.7.** and **B.13.** All valid emissions data (including data collected during startup, shutdown, malfunction, DLN tuning, and fuel switching) shall be used to report emissions for the Annual Operating Report. [Rules 62-212.400(BACT), 62-210.370, and 62-210.700, F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.13. Secondary NO<sub>x</sub> BACT Emission Limits:** During the operating conditions listed in Specific Condition **B.12.**, the permittee shall comply with the Secondary NO<sub>x</sub> BACT limit specified in Specific Condition **B.7.** Demonstrating compliance with the NSPS Subpart KKKK limit for NO<sub>x</sub> shall be sufficient for demonstrating compliance with the Secondary NO<sub>x</sub> BACT limit. [Rule 62-212.400(BACT) and 40 CFR 60, Subpart KKKK; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.14. Alternate Visible Emissions Standard:** Visible emissions when firing natural gas due to startups, shutdowns, fuel switches and malfunctions shall not exceed 10% opacity, except for up to six 6-minute

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

averaging periods during a calendar day, which shall not exceed 20% opacity. Visible emissions when firing ULSD fuel oil during startups and shutdowns shall be minimized by following the manufacturer's best practices and good combustion practices for minimizing emissions. [Rule 62-212.400(BACT); and, Permit Nos. 0110037-013-AC (PSD-FL-423A) & 0110037-015-AC (PSD-FL-423B)]

**B.15. BACT Work Practice Standards for Startup and Shutdown:**

- a. *Startup:* The permittee shall fire only natural gas or ULSD fuel oil during all periods of startup, up to a load of no less than 40%, except for periods when the use of fuel oil is required for peaking generation, or for purposes of testing and maintenance. The permittee shall maintain documentation of all startups on ULSD for a period of five years and shall make this documentation available to the Department upon request. [Rules 62-213.440(1)(b)2. and 62-212.400 (BACT); and Permit Nos. 0110037-013-AC(PSD-FL-423A) and 0110037-015-AC(PSD-FL-423B)]
- b. *Manufacturer-Recommended Startup and Shutdown Procedures:* The permittee shall follow the manufacturer's recommended operating procedures for startup and shutdown. All personnel responsible for startup or shutdown of equipment shall be familiar with these procedures. For each operator responsible for startup or shutdown of these turbines, the permittee shall document that the operator has been trained in the manufacturer's recommended procedures for startup and shutdown. The permittee shall make this documentation available to the Department upon request. [Rule 62-212.400 (BACT) and Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.16. Excess Emissions Allowed.** Except as specified in Specific Conditions **B.11.**, **B.12.** and **B.13.**, excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

**B.17. Notification of Excess Emissions.** The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate non-compliance for a given averaging period. [Rule 62-4.070, F.A.C. and Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.18. NSPS Excess Emissions Requirements.** For each affected emissions unit required to continuously monitor NO<sub>x</sub> emissions, you must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction. [40 CFR 60.4375]

- a. For the purposes of this condition, an *excess emission* is any unit operating period in which the 4-hour rolling average NO<sub>x</sub> emission rate exceeds the applicable Secondary BACT emission limits in Specific Condition **B.7**. For the purposes of this condition, a "4-hour rolling average NO<sub>x</sub> emission rate" is the arithmetic average of the average NO<sub>x</sub> emission rate in ppm measured by the CEMS for a given hour and the three-unit operating hour average NO<sub>x</sub> emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO<sub>x</sub> emission rate is obtained for at least 3 of the 4 hours. [40 CFR 60.4380(b)(1)]
- b. A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> concentration, or fuel flow rate. Only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report. [40 CFR 60.4380(b)(2) and 60.4350(d)]
- c. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. [40 CFR 60.4380(b)(3)]

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

[Rules 62-204.800(8)(b)84 and 62-212.400(BACT), F.A.C.; and Permit No. 0110037-013-AC (PSD-FL-423A)]

#### **Monitoring of Operations**

**B.19. Monitoring of Operations:** The permittee shall monitor and record the operating rate of the CT on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction, DLN tuning or its equivalent, and fuel switching). Such monitoring shall be made by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.20. GHG BACT Monitoring Requirements:**

- a. **System Requirements:** The permittee shall install and certify monitoring systems required for quantifying CO<sub>2</sub> emissions from each CT in accordance with the applicable requirements in 40 CFR Part 75. Following initial certification, the CO<sub>2</sub> continuous measurement systems shall be quality assured in accordance with the applicable requirements in 40 CFR Part 75. The CO<sub>2</sub> continuous measurement system shall be capable of producing hourly determinations of CO<sub>2</sub> mass emissions in tons per hour.
- b. The permittee shall provide notifications as specified in 40 CFR 75.61 for any event related to the continuous measurement of CO<sub>2</sub>.
- c. The permittee shall measure and record, for each CT, the following data on an hourly basis:
  - (1) Gross energy output (MW)
  - (2) CO<sub>2</sub> mass emissions (tons or pounds)
  - (3) Fuel heat input (MMBtu)
  - (4) Type of fuel burned (natural gas or ULSD). The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75, Appendix D.

[Rule 62-212.400(BACT), F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

#### **Continuous Emissions Monitoring Requirements**

**B.21. CEMS.** Subject to the following, the permittee shall install, calibrate, operate, and maintain a CEMS to measure and record the emissions of NO<sub>x</sub> from the combustion turbines in terms of the applicable standards.

- a. **NO<sub>x</sub> Monitor:** Each NO<sub>x</sub> monitor shall be certified pursuant to the specifications of 40 CFR 75. Quality assurance procedures shall conform to the requirements of 40 CFR 75. The annual and required RATA tests required for the NO<sub>x</sub> monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.
- b. **Diluent Monitor:** The oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) content of the flue gas shall be monitored at the location where NO<sub>x</sub> is monitored to correct the measured emissions rates to 15% O<sub>2</sub>. If a CO<sub>2</sub> monitor is installed, the O<sub>2</sub> content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.
- c. **Moisture Correction:** The permittee shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).

[Rules 62-4.070(3), 62-212.400(BACT), F.A.C., 40 CFR 75; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.22. CEMS Data Requirements for BACT Standards:** *{These requirements cannot vary or supersede any federal provision of the NSPS or Acid Rain programs. Additional reporting and monitoring may be required by the individual subparts.}*

- a. **Data Collection:** Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions shall be monitored and recorded during all operation including startup, shutdown, and malfunction.

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

- b. *Operating Hours and Operating Days:* An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.
- c. *Valid Hour:* Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.
  - (1) Hours that are **not operating hours** are **not valid** hours.
  - (2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid.
  - (3) During fuel switching an hour in which any fuel oil is fired is attributed towards compliance with the permit standards for oil firing.
- d. *24-hour Block Averages:* A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive valid hourly average concentration values. If a unit operates less than 24 hours during the block, or there are less than 24 valid hourly averages available, the 24-hour block average shall be the average of all available valid hourly average concentration values for the 24-hour block. *{Permitting Note: For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, Subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block and periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance reports.}*
- e. *4-hour Rolling Averages:* A 4-hour rolling average is the arithmetic average of the average emission concentration measured by the CEMS for a given hour and the three-unit operating hour average concentrations immediately preceding that unit operating hour.
- f. *Data Collection:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, DLN tuning, and fuel switches.
- g. *Availability:* The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated.

[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.; and Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.23. CEMS and CO<sub>2</sub> Monitor Annual Emissions Requirement:** The owner or operator shall use data from the NO<sub>x</sub> CEMS and CO<sub>2</sub> monitoring system when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit. [Rules 62-210.200, and 62-210.370(3), F.A.C.]

#### **Test Methods and Procedures**

**B.24. Test Methods.** When required, tests shall be performed in accordance with the following reference methods:

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

Method	Description of Method and Comments
	{Note: The method shall be based on a continuous sampling train. }
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)
320	Vapor Phase Organic & Inorganic Emissions by Extractive FTIR

The above methods are described in 40 CFR 60 and 63, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Office of Permitting and Compliance Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800, F.A.C.; 40 CFR 60 and 63, Appendix A; and, Permit Nos. 0110037-013-AC (PSD-FL-423A) & 014-AC]

**B.25. 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.]

**B.26. Annual Compliance Tests Required.** During each calendar year (January 1<sup>st</sup> to December 31<sup>st</sup>), each CT shall be tested to demonstrate compliance with the emissions standards for CO and visible emissions while firing natural gas (at baseload without evaporative cooling or wet compression). An annual test for CO and visible emissions test shall also be performed while firing fuel oil, on each CT that has fired fuel oil for more than 400 hours during the calendar year. Compliance tests for VOC shall be conducted prior to each renewal of the facility's Title V operating permit. VOC compliance tests shall be conducted while firing natural gas. A VOC compliance test shall also be performed while firing fuel oil, on each CT that has fired fuel oil for more than 400 hours during any calendar year since the previous renewal of the facility's Title V permit. [Rules 62-4.070, 62-212.400(BACT) and 62-297.310(8), F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A) & 018-AC (PSD-FL-423C)]

*{Permitting Note: Tests which are only required once during the term of a permit prior to obtaining a renewed permit should be performed roughly five years from the previous test.}*

**B.27. Additional Compliance Test Requirements.** Annual tests shall be conducted at 90% or greater of the design heat input ratings provided in Specific Condition **B.1.** and corrected as described therein. If it is impracticable to test within the described range, the combustion turbine may be tested at less than the described range. In such case, the reported mass emission rates (corrected as described in Specific Condition **B.7.**) shall be further corrected by dividing the result by the percent of the design heat rating at which the test was conducted and multiplying by 100%. For example, if tested at 85% capacity and the measured actual mass emission rate was 50 lb/hour, the adjusted mass emission rate ( $ER_{adj}$ ) would be:

$$ER_{adj} = \frac{(50 \text{ lb/hr}) \times (100\%)}{85\%} = 58.8 \text{ lb/hr}$$

[Permit No. 0110037-013-AC (PSD-FL-423A)]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection B. Emissions Units 046, 047, 048, 049, 053

##### **Recordkeeping and Reporting Requirements**

**B.28. Reporting Schedule.** The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Conditions
Notice of Malfunctions	Quarterly, if requested by the Compliance Authority	<b>B.12.b</b>
Excess Emissions Report	Quarterly.	<b>B.18.</b>

[Rule 62-213.440(1)(b), F.A.C.]

**B.29. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

**B.30. Monthly Operations Summary.** By the 15th calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for the combustion turbines for the previous month of operation: fuel consumption, hours of operation on each fuel, and the updated calendar year totals for each. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.; and Permit No. 0110037-013-AC(PSD-FL-423A)]

**B.31. Fuel Sulfur Recordkeeping.** The permittee shall demonstrate compliance with the fuel sulfur limits specified in Specific Condition **B.7.** by maintaining the following records of the sulfur contents, as follows:

- Natural Gas Sulfur Limit:* Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions.
- ULSD Fuel Oil Sulfur Limit:* Compliance with the ULSD fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of the Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3), 62-4.160(15) and 62-212.400(BACT), F.A.C.; and, Permit No. 0110037-013-AC (PSD-FL-423A)]

**B.32. Excess Emissions Reporting.**

- Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.
- SIP Semi-Annual Report:* Within 30 days following the end of each calendar semi-annual period, the permittee shall submit a report to the Compliance Authority summarizing periods of NO<sub>x</sub> and GHG emissions in excess of the BACT permit standards. In addition, the report shall summarize the CO<sub>2</sub> and NO<sub>x</sub> CEMS system monitor availability for the previous semi-annual period.

## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

### Subsection B. Emissions Units 046, 047, 048, 049, 053

- c. *NSPS Semi-Annual Excess Emissions Reports.* For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the gas turbine are defined as: a specified averaging period over which either the NO<sub>x</sub> emissions are greater than 15 ppm at 15% O<sub>2</sub> on a 4 hour rolling average while firing natural gas (at any load condition within plus or minus 25% of 100% of peak load); greater than 42 ppm at 15% O<sub>2</sub> on a 4 hour rolling average while firing ULSD (at any load condition within plus or minus 25% of 100% of peak load); greater than 96 ppm at 15% O<sub>2</sub> on a 4 hour rolling average while firing oil or natural gas (at turbine loads below 75%); or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 60.4330. Within 30 days following each calendar semi-annual period, the permittee shall submit a report on any periods of excess emissions that occurred during the previous semi-annual period to the Compliance Authority.

[Rules 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400(BACT), F.A.C., 40 CFR 60.7 and 60.4375; and, Permit Nos. 0110037-013-AC (423A) & 018-AC (PSD-FL-423C)]

#### **Other Requirements**

- B.33. NSPS 40 CFR 60 Requirements – Subpart KKKK:** Except as otherwise provided in this permit, these emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart KKKK – Standards of Performance for Stationary Gas Turbines and Subpart A - General Provisions, which have been adopted by reference in Rule 62-204.800(8)(b)83., F.A.C. These emissions units shall comply with Appendix NSPS 40 CFR 60, Subpart KKKK included with this permit. [Rule 62-204.800(8)(b)(84), F.A.C.; and NSPS 40 CFR 60, Subparts A and KKKK]

- B.34. NSPS 40 CFR 60 Requirements – Subpart TTTT:** Except as otherwise provided in this permit, these emissions units shall comply with all applicable requirements of 40 CFR 60, Subpart TTTT – Standards of Performance for Stationary Gas Turbines and Subpart A - General Provisions, which have been adopted by reference in Rule 62-204.800(8)(b)87., F.A.C. These emissions units shall comply with Appendix NSPS 40 CFR 60, Subpart TTTT included with this permit. [Rule 62-204.800(8)(b), F.A.C.; and NSPS 40 CFR 60, Subparts A and TTTT]

*{Permitting Note: The requirements of NSPS 40 CFR 60, Subpart TTTT apply to any stationary combustion turbine that commenced construction after January 8, 2014 or commenced reconstruction after June 18, 2014, that has a base load rating greater than 250 MMBtu/hr of fossil fuel, and serves a generator or generators capable of selling greater than 25 MW of electricity to a utility power distribution system. However, the emission limits in Table 2 only apply if each unit supplies more than its design efficiency (39.8%) times its potential electric output as net-electric sales on both a 12-operating month and a 3-year rolling average basis, and combusts more than 90% natural gas on a heat input basis on a 12-operating month rolling average basis.}*

- B.35. NESHAP 40 CFR 63 Requirements - Subpart YYYY.** Except as otherwise provided in this permit, these emissions units shall comply with all applicable requirements of 40 CFR 63, Subpart A and Subpart YYYY – National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, which have been adopted by reference in Rule 62-204.800(11)(b)81., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.6170(c)(1) through (5). These emissions units shall comply with Appendix NESHAP 40 CFR 63 Subpart YYYY included with this permit. [Rule 62-204.800(11)(b)81, F.A.C.; and NESHAP 40 CFR 63, Subparts A and YYYY.]

*{Permitting Note: The requirements of NESHAP 40 CFR 63, Subpart YYYY emission limitations for oil-fired Stationary Combustion Turbines will apply if the facility exceeds 1,000 turbine fired hours on fuel oil cumulatively in any one year.}*

#### **[Table of Contents](#)**

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection C. Emissions Units 027, 028, 029, 030

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

EU No.	Brief Description
027	Fuel Oil Storage Tank #2 (80,000 bbl)
028	Fuel Oil Storage Tank #3 (150,000 bbl)
029	Fuel Oil Storage Tank #5 (75,000 bbl, Light Distillate Oil)
030	2 Fuel Oil Dump Tanks (2,500 gallon and 110 gallon)

This Subsection describes a variety of fuel storage tanks, three fuel oil storage tanks consisting of light distillate oil and two fuel oil dump tanks, at the facility.

*{Permitting Note: These emissions units are regulated under Air Construction Permit Nos. AC06-179848 and 0110037-018-AC. The total VOC emissions from these emissions units are included in the facility-wide VOC cap of 99.92 TPY.}*

#### **Emission Limitations and Standards**

**C.1. VOC Emissions.** The maximum VOC emissions and volume of organic liquids handled by the tanks shall not exceed the following:

EU No.	Organic Liquid	Annual Throughput Limit (Gallons)	VOC Emissions Limit (TPY)
027	No. 2 distillate fuel oil	54,260,842	2.33
028	No. 2 fuel oil	106,079,730	4.46
029	No. 2 distillate fuel oil	54,260,842	2.29
030	No. 2 fuel oil	300,000	0.003

[Rule 62-296.320(1)(a), F.A.C.; and Permit Nos. AO06-230614, AO06-253684, and AC06-179848]

#### **Recordkeeping and Reporting Requirements**

**C.2. Reporting Schedule.** The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Conditions
Annual Operating Report	Annual	<b>C.3.</b>

[Rule 62-213.440(1)(b), F.A.C.]

**C.3. Annual Operating Report of VOC Emissions.** The VOC emissions in TPY, by specific tank, for all the units identified in Specific Condition **C.1**, shall be calculated for Annual Operating Report for Air Pollutant Emitting Facility purposes by the procedures described in AP-42, Section 4.3, Storage of Organic Liquids. Actual throughput and representative meteorological data shall be used for these calculations. Also see Specific Condition **FW10** in the Facility-Wide Conditions Section. [Rule 62-210.370(3), F.A.C.; and, Permit Nos. AC06-179848 and AO06-230614]

**C.4. Fuel Oil Records.** The permittee shall keep records of the following for at least 5-years:

- The amount of light distillate fuel oil obtained for the facility.
- The amount of No. 2 fuel oil obtained for the facility.
- The throughput, by specific tank, for all the units identified in Specific Condition **C.1**.  
[Permit Nos. AC06-179848 & AO06-230614]

### **SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

---

#### **Subsection C. Emissions Units 027, 028, 029, 030**

**C.5. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

[Table of Contents](#)

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection D. Emissions Unit 039

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

EU No.	Brief Description
039	Site Solvent Usage

This emissions unit includes the use of solvents for equipment maintenance purposes at the facility.

#### Emission Limitations and Standards

**D.1. VOC Emissions.** Not more than 250 gallons/year, or 0.893 TPY, of VOC loss of solvent during any 12-month period shall be allowed for maintenance of this facility. [Permit No. AC06-179848]

#### Monitoring of Operations

**D.2. Solvent Use.** The use of solvents for maintenance purposes shall be tracked and controlled during the calendar year. The VOC emissions from solvents shall be calculated by the following method: The solvent volume loss shall be equal to the total solvent purchased/in stock minus the solvent volume reclaimed/disposed of offsite. The solvent volume loss shall then be multiplied by the emission factor (mass VOC/unit of the solvent) to derive at a TPY value. The total solvent TPY emission value shall be added to all other VOC sources at the facility to ensure compliance with Specific Condition **FW10**, in Section II., Facility-Wide Conditions, of this permit. Specific Condition **FW10** limits facility-wide VOC emissions to 99.92 TPY. Note that the combined-cycle units, Unit 4 and Unit 5, are excluded from Specific Condition **FW10**. [Permit Nos. AC06-179848 and AO06-230614]

#### Recordkeeping and Reporting Requirements

**D.3. Records of Solvent Use.** The permittee shall keep records of the type and quantity of solvents, in gallons per year, used during maintenance throughout this facility for a minimum of 5-years. [Permit Nos. AC06-179848 and AO06-230614]

**D.4. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

[Table of Contents](#)

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection E. Emissions Unit 044

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

EU No.	Brief Description
044	Emergency Diesel-Fired Fire Pump Engine (376 HP)

The unit is one diesel fire pump, manufactured by Caterpillar, with serial number 6TB08902, Model 3406B DI, 376 HP, in service 1986, with 6 cylinders and 14.6 liters total displacement.

This emissions unit is a diesel-fired reciprocating internal combustion engine (RICE) used to drive an emergency fire pump. The emergency fire pump engine uses ultra-low sulfur fuel oil only.

The following table provides important details for the above emission unit:

Engine Brake HP	Date of Construction	Manufacturer	Model Number	Displacement liters/cylinder (l/c)	Serial Number
376 HP	1986	Caterpillar	3406B	2.43	6TB08902

*{Permitting Note: This compression ignition (CI) engine used to drive an emergency fire pump is regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE adopted in Rule 62.204.800(11)(b), F.A.C. Because this engine qualifies as an existing stationary RICE less than 500 HP operating at a major source of HAP, it is not subject to regulation under NSPS 40 CFR 60, Subpart IIII.}*

#### **Essential Potential to Emit (PTE) Parameters**

##### **E.1. Hours of Operation.**

- Emergency Situations.* There is no time limit on the use of this fire pump engine in emergency situations. [40 CFR 63.6640(f)(1)]
- Maintenance and Readiness Testing.* This engine 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. Operation for maintenance checks and readiness testing is limited to 100 hours/year. [40 CFR 63.6640(f)(2)(i)]
- Non-emergency Situations.* This engine is authorized to operate up to 50 hours/year in non-emergency situations, but those 50 hours are counted towards the 100 hours/year provided for maintenance and testing. [40 CFR 63.6640(f)(3)]

#### **Emission Limitations and Operating Requirements**

##### **E.2. Work or Management Practice Standards.**

- Oil.* Change oil and filter every 500 hours of operation or annually, whichever comes first. [40 CFR 63.6602 & Table 2c.1.a.]
- Air Cleaner.* Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602 & Table 2c.1.b.]
- Hoses and Belts.* Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63.6602 & Table 2c.1.c.]
- 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) & Table 6.9.].
- Engine Startup.* During periods of startup the owner or operator must minimize the engine's time spent at

---

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection E. Emissions Unit 044

idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

- f. *Oil Analysis.* The owner or operator has the option of using oil analysis to extend the oil change requirement. The oil analysis must be performed at the same frequency specified for changing the oil in paragraph a., of this condition. 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% of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20% 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 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**

- E.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**

- E.4. Continuous Compliance.** Each unit shall be in compliance with the operating standards in this section at all times. [40 CFR 63.6605(a)]
- E.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 and Reporting Requirements**

- E.6. Notification, Performance and Compliance Records.** The owner or operator must keep:
- A copy of each notification and report that the owner or operator submitted to comply with this section, including all documentation supporting any Initial Notification or Notification of Compliance Status that the owner or operator submitted.
  - Records of the occurrence and duration of each malfunction of operation.
  - Records of all required maintenance performed on the hour meter.
  - Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition **E.5**, including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation.
  - Records of the actions required in specific condition **E.2.d.** to show continuous compliance with each emission limitation or operating requirement.
  - Records of the Work or Management Practice Standards specified in Specific Condition **E.2**.
  - Records of the maintenance conducted in order to demonstrate that the RICE was operated and maintained according to your own maintenance plan.
  - 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



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection E. Emissions Unit 044

classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for emergency demand response operation or for periods of voltage or frequency deviations, the owner or operator must keep records of the notification of the emergency situation, and the time of engine operation for these purposes.

[40 CFR 63.6655]

**E.7. 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)]

**E.8. Delay of Performing Work Practice Requirements.** If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in specific condition **D.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 2c, footnote 1]

#### **Other Federal Requirements**

**E.9. 40 CFR 63 Subpart A - General Provisions.** The owner or operator 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 63.14. [Link to 40 CFR 63, Subpart A - General Provisions](#)

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
§63.9(a)	Applicability and State delegation of notification requirements
§63.9(b)(1)–(5)	Initial notifications (Except that §63.9(b)(3) is reserved)
§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)(vi)–(xi)	Records
§63.10(b)(2)(xii)	Record 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(f)	Waiver for recordkeeping/reporting
§63.12	State authority and delegations

---

**SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.**

---

**Subsection E. Emissions Unit 044**

<b>General Provisions Citation</b>	<b>Subject of Citation</b>
§63.13	Addresses
§63.14	Incorporation by reference
§63.15	Availability of information

[40 CFR 63.6665]

[Table of Contents](#)

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection F. Emissions Unit 042

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

EU No.	Brief Description
042	Auxiliary Boiler (15.5 MMBtu/hr)

The auxiliary boiler is used to provide steam to the turbine shaft seals during a cold start of the plant. The boiler has a maximum heat input rate is 15.5 MMBtu/hr and fires propane. This boiler was previously unregulated. There is no air construction permit for the unit. It was installed under a categorical exemption pursuant to Rule 62-210.300(3)(a)2., F.A.C.

*{Permitting Note: This emissions unit is subject to NSPS Subpart A, General Provisions, and NESHAP Subpart DDDDD, for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, of 40 CFR 63, adopted and incorporated under Rule 62-204.800(11)(b)86, F.A.C. This is an existing gas 1 boiler that started up prior to June 4, 2010.}*

#### **Essential Potential to Emit (PTE) Parameters**

**F.1. Design Capacity.** The auxiliary boiler has a maximum design capacity of 15.5 MMBtu/hr.  
[Rule 62-210.200(PTE), F.A.C.]

**F.2. Hours of Operation.** The hours of operation are not limited (8,760 hours/year).  
[Rule 62-210.200(PTE), F.A.C.]

#### **Work Practice Standards**

- F.3. Work Practice Standards.** The auxiliary boiler shall be in compliance with the following work practice standards at all times:
- a. *Boiler without O<sub>2</sub> Trim System:*
- (1) *Tune-Up:* Conduct a tune-up of the boiler annually, no more than 13 months after the previous tune-up, while burning propane (Gas 1 subcategory). This Gas 1 boiler will conduct this tune-up as a work practice for all regulated emissions. The tune-up shall include the following:
    - (a) Inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;
    - (b) Inspect the flame pattern, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
    - (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
    - (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available;
    - (e) Measure the concentrations in the effluent stream of CO in ppmv, and O<sub>2</sub> in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
    - (f) Maintain on-site and submit, if requested by the Department, a report containing the following information:
      - i. The concentrations of CO in the effluent stream in ppmv, and O<sub>2</sub> in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler;
      - ii. A description of any corrective actions taken as a part of the tune-up; and

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection F. Emissions Unit 042

- iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period.
- (2) If the boiler is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

*{Permitting Note: If a continuous oxygen trim system is installed, the auxiliary boiler is subject to the tune-up requirement every five years instead of annually.}*

- b. **Good Combustion Practices:** At all times, you must operate and maintain the Gas 1 boiler 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 Department that 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), F.A.C.; and, 40 CFR 63.7500, 63.7540, and Table 3]

**F.4. Energy Assessment.** The permittee shall have a one-time energy assessment meeting the requirements in 40 CFR 63.7500 and Table 3. [Rule 62-204.800(11)(b), F.A.C.; and 40 CFR 63.7500 and Table 3]

#### **Recordkeeping and Reporting Requirements**

**F.5. Reporting Schedule.** The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Conditions
Semi-Annual Report	Semi-Annually	F.8.

[Rule 62-213.440(1)(b), F.A.C.]

**F.6. Recordkeeping Requirements.**

- a. **Records:** The permittee shall keep the records of each notification and report that submitted, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
- b. **Record Retention:** Records shall be recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5-years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2-years of data shall be retained on site. The remaining 3-years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. [Rule 62-204.800(11)(b), F.A.C.; and, 63.10(b), 63.7555(a) and 63.7560]

**F.7. Notification of Compliance Status.** Include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Specific Condition **F.4.**, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [Rule 62-204.800(11)(b), F.A.C.; and 40 CFR 63.7530(e)]

**F.8. Semi-Annual Report.** The permittee shall include the following information in the semi-annual reporting requirement in Section II, Condition **FW9**:

- a. Company and Facility name and address.
- b. Process unit information.
- c. Date of report and beginning and ending dates of the reporting period.
- d. The total operating time during the reporting period.
- e. Date of the most recent tune-up. Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.
- f. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

---

## SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

### Subsection F. Emissions Unit 042

[Rules 62-213.440(1)(b)3.a. & 62-204.800(11)(b), F.A.C.; and, 40 CFR 60.19, 40 CFR 61.10, 40 CFR 63.10 & 63.7550]

#### **Other Requirements**

**F.9.** 40 CFR 63, Subpart A. In addition to the above requirements, this emissions unit shall also comply with the applicable requirements listed below, which are contained in the attached Appendix NESHAP A: 40 CFR 63, Subpart A - General Provisions.

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(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(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)(vi)–(xi)	Records
§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]

**F.10.** 40 CFR 63 Requirements - Subpart DDDDD. Except as otherwise provided in this permit, these emissions units shall comply with all applicable requirements of 40 CFR 63, Subpart DDDDD, NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters, which have been adopted by reference in Rule 62-204.800(11)(b)86., F.A.C., except that the Secretary is not the Administrator for purposes of the authorities cited at 40 CFR 63.7570(b)(1) through (5). [Rule 62-204.800(11)(b)86., F.A.C.]

#### [Table of Contents](#)

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection G. Emissions Unit 003

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

EU No.	Brief Description
003	Two Combustion Turbines

EU 003 consists of two SCCT units. Each CT has a net capability of 42 MW. The CT units commenced commercial operation in August 1970 and August 1972. Both units have stacks with a height of 45 feet.

*{Permitting Notes: These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required. These emissions units are **not** subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines.}*

#### **Essential Potential to Emit (PTE) Parameters**

**G.1. Permitted Capacity.** The maximum operation heat input rate for each CT is as follows:

Unit No.	MMBtu/hr Heat Input (LHV)	Fuel Type
003	702	Natural gas or light distillate fuel oil

[Rules 62-4.160(2), 62-204.800, 62-210.200(PTE), and Permit No. AO06-230614.]

**G.2. Permitted Capacity.** The total fuel firing rate (LHV) for the two turbines shall not exceed 1,404 MMBtu/hr (3-hour average) during fuel oil firing or natural gas firing. The annual heat input (LHV) for the two gas turbines, combined, shall not exceed  $1,230 \times 10^9$  Btu. Compliance with the permitted capacity shall be demonstrated during annual testing and upon request through the use of fuel vendor-supplied heat content data and the fuel usage records required by Specific Condition **G.22**. [Rule 62-213.440(1)(b)1b, F.A.C.; and, Permit Nos. 0110037-013-AC(PSD-FL-423A) & AO06-148762]

*{Permitting Note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100% of the unit's rated capacity (or to limit future operation to 110% of the test load), to establish appropriate emission limits and to aid in determining future rule applicability.}*

**G.3. Emissions Unit Operating Rate Limitation After Testing.** See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

**G.4. Methods of Operation - Fuels.** The only fuels authorized to be burned in these emissions units are natural gas or light distillate fuel oil. [Rule 62-213.410, F.A.C., and Permit No. AO06-230614]

**G.5. Hours of Operation.** These emissions units may operate continuously (8,760 hours/year). [Rule 62-210.200(PTE), F.A.C., and Permit No. AO06-223496]

#### **Emission Limitations and Standards**

Unless otherwise specified, the averaging times for Specific Conditions **G.6 - G.8** are based on the specified averaging time of the applicable test method.

**G.6. Visible Emissions.** Visible emissions from each turbine shall not be equal to or greater than 20% opacity. [Rule 62-296.320(4)(b)1., F.A.C., and Permit No. AO06-230614]

**G.7. VOC Emissions.**

- VOC emissions from each gas turbine shall not exceed 0.0013 lb/MMBtu when burning No. 2 fuel oil, and 0.0034 lb/MMBtu when burning natural gas. When both fuels are burned at the same time, the allowable emissions shall be prorated. [Permit Nos. AC06-179848 and AO06-230614]
- Total VOC emissions from the two gas turbines when operating at the permitted capacity shall not exceed 4.78 lbs/hr when the units are burning natural gas, and 1.76 lbs/hr when the units are burning oil. When

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection G. Emissions Unit 003

both fuels are burned at the same time, the allowable emissions shall be prorated. [Permit Nos. 0110037-015-AC(PSD-FL-423B), AC06-179848, and AO06-230614]

- G.8. NO<sub>x</sub> Emissions.** NO<sub>x</sub> emissions from each gas turbine shall not exceed 0.90 lb/MMBtu and 631 lbs/hr when burning No. 2 fuel oil, and 0.50 lb/MMBtu and 351 lbs/hr when burning natural gas. [Rule 62-296.570(4)(b)5., F.A.C.; and, Permit No. AO06-148760]

#### **Excess Emissions**

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

- G.9. Excess Emissions Allowed.** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]
- G.10. Excess Emissions Not Allowed.** 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.]

#### **Test Methods and Procedures**

- G.11. Test Methods.** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of NO <sub>x</sub> Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
20	Determination of NO <sub>x</sub> , SO <sub>2</sub> and Diluent Emissions from Stationary Gas Turbines
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-213.440, 62-296.320, 62-296.570, F.A.C.; and, Permit Nos. AC06-179848 & AO06-230614]

- G.12. 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.]
- G.13. Annual Compliance Tests.** Except as provided in Specific Conditions **G.15**, **G.17** and **G.18**, during each calendar year (January 1<sup>st</sup> to December 31<sup>st</sup>), each EU shall be tested to demonstrate compliance with the emissions standards for visible emissions and NO<sub>x</sub> emissions. However, any combustion turbine that does not operate for more than 400 hours/year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit. [Rules 62-296.570 and 62-297.310(8), F.A.C.]
- G.14. Compliance Tests Prior To Permit Renewal.** The owner or operator shall conduct testing to demonstrate compliance with the emissions standards for VE, NO<sub>x</sub> and VOC emissions prior to renewal of the facility's Title V Air Operation Permit. See Specific Condition **TR.7**. See Specific Condition **G.18**. [Rule 62-297.310(7), F.A.C.; Permit No. AC06-179848]

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection G. Emissions Unit 003

**G.15. Visible Emissions Testing Required.** The owner or operator shall conduct testing for visible emissions, using EPA Method 9, while the combustion turbine is operating at 90-100% of its capacity, according to the following schedule:

- a. The owner or operator shall conduct testing for visible emissions while firing fuel oil for each simple-cycle turbine unit upon that turbine's exceeding 400 hours of operation on fuel oil, and every 150 hours of operation on fuel oil thereafter, in any given federal fiscal year (October 1<sup>st</sup> through September 30<sup>th</sup>). Such tests shall be performed within 15 days of exceeding such operating hours, to allow for prior notification of the tests.
- b. Regardless of the number of hours of operation on fuel oil, at least one compliance test shall be conducted on all combustion turbines every five years, coinciding with the term of the operation permit for these turbines.

[Rule 62-213.440, F.A.C.; applicant agreement with EPA on March 3, 1998; and, Permit Nos. 0110037-013-AC(PSD-FL-423A) & AC06-179848]

*{Permitting Note: The above condition was negotiated as part of an EPA objection resolution dated March 10, 1998, to satisfy periodic monitoring concerns for visible emissions while burning fuel oil. **Annual VE compliance testing while firing gas is not required for these units.** The above language replaces the original requirements for testing contained in Specific Condition 23 of Permit No. AC06-179848}*

**G.16. VE Test Method.** The test method for visible emissions shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. [Rules 62-204.800, 62-296.320(4)(b)4.a. & 62-297.401, F.A.C.; and, Permit No. AC06-179848]

**G.17. NO<sub>x</sub> Test Methods.** Provided operation is no more than 320 hours/year/turbine on oil, NO<sub>x</sub> emissions for the combustion turbines shall be tested every 5-years by EPA Method 20 or Method 7E tests as described in 40 CFR 60, Appendix A, on any representative unit. Tests shall be conducted both while burning 100% natural gas and 100% light distillate oil. [Rule 62-296.570, F.A.C.; Rule 297.310(8)(a)2.b., F.A.C.; and, Permit Nos. 0110037-013-AC (PSD-FL-423A) & AO06-148760]

*{Permitting Note: The above specific condition was revised based on changes implemented at the proposed permit stage of the prior two Title V permit renewal actions.}*

**G.18. VOC Test Methods.** The VOC emission factors for the combustion turbines shall be confirmed every 5-years by EPA Method 25A and/or Method 18 tests as described in 40 CFR 60, Appendix A, on any representative unit. Tests shall be conducted both while burning 100% natural gas and 100% No. 2 fuel oil. [Permit Nos. 0110037-013-AC (PSD-FL-423A), AC06-179848; AO06-230614, and, Administrative Permit Correction dated November 7, 2000.]

*{Permitting Note: Specific Condition G.18. identifies that VOC testing is to be required only once within the five-year permit renewal cycle and results submitted in conjunction with the Title V air operation permit renewal application.}*

#### **Recordkeeping and Reporting Requirements**

**G.19. Reporting Schedule.** The following reports and notifications shall be submitted to the Compliance Authority:

Report	Reporting Deadline	Related Conditions
Notice of Malfunctions	Quarterly, by request.	<b>G.21.</b>
Notice of Excess Emissions	Quarterly.	<b>G.23.</b>

[Rule 62-213.440(1)(b), F.A.C.]

**G.20. Additional Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [62-213.440, F.A.C.]



### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

---

#### Subsection G. Emissions Unit 003

- G.21. Malfunction Reporting.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.  
[Rule 62-210.700(6), F.A.C.]
- G.22. Fuel Records.** The permittee shall keep records of the type and quantity of fuel, gallons/hour of oil and million cubic feet per hour of natural gas used by each combustion turbine for at least 5-years. Usage shall be determined on the basis of time of operation versus total fuel consumption for each turbine.  
[Rule 62-213.440(1)(b)2, F.A.C.; and, Permit Nos. AC06-179848& 0110037-018-AC]
- G.23. Semi-Annual Reports.** A written semi-annual report shall be submitted to the Department of all opacity exceedances of emissions limitations specified in Rules 62-210.700 and 62-296.310, F.A.C. The report shall state the cause, period of noncompliance, and steps taken for corrective action and/or prevention of recurrence. If the opacity level cannot be determined for any reason, the report shall state the cause, duration, and action taken. All recorded data shall be maintained on file for not less than 5-years and made available to the Department upon request. [Permit Nos. AC06-179848, AO06-230614 & 0110037-018-AC]

[Table of Contents](#)

### SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

#### Subsection H. Emissions Unit 054

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

EU No.	Brief Description
054	Circuit Breakers

The circuit breaker contain sulfur hexafluoride (SF<sub>6</sub>).

*{Permitting notes: This emissions unit is regulated under Rule 212.400, F.A.C., PSD, BACT, and Air Construction Permit Nos. 0110037-013-AC (PSD-FL-423A), 013-AC (PSD-423A) and 015-AC (423B).}*

#### **Essential Potential to Emit (PTE) Parameters**

**H.1. Permitted Capacity:** The permittee shall operate and maintain the circuit breakers associated with Unit 6 containing SF<sub>6</sub>. The circuit breakers must have a manufacturer-guaranteed SF<sub>6</sub> leak rate of no more than 0.5%/year. The circuit breakers must be equipped with leakage detection systems and alarms.

[Rule 62-212.400(BACT), F.A.C.; and, Permit Nos. 0110037-013-AC & 015-AC]

**H.2. Hours of Operation:** The hours of operation are not restricted (8,760 hours/year).

[Permit No. 0110037-013-AC (PSD-FL-423A)]

#### **Monitoring of Operations**

**H.3. Monitoring Plan Requirements:** The permittee shall maintain a circuit breaker monitoring plan on-site detailing the number of circuit breakers installed and procedures for detecting leaks from the circuit breakers and expected remedial courses of action after leaks are detected. Any necessary revisions to the monitoring plan shall submitted to the Department to be included with the facility's Title V air operation permit. Records of monitoring and any corrective actions taken shall be kept on-site for 5-years from the date of observation or corrective action and made available to the Department for inspection upon request. [Rules 62-213.440(1)(b)2. & 62-212.400(BACT), F.A.C.; and, Permit Nos. 0110037-013-AC & 015-AC]

[Table of Contents](#)

## SECTION IV. ACID RAIN PART.

### Federal Acid Rain Provisions

---

Operated by: Florida Power and Light Company  
ORIS Code: 0613

The emissions units listed below are regulated under Acid Rain, Phase II.

<b><u>E.U. ID No.</u></b>	<b><u>Brief Description</u></b>
035	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator (CT 4A)
036	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator (CT 4B)
037	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator (CT 5A)
038	Combined-Cycle Combustion Turbine with Heat Recovery Steam Generator (CT 5B)
046	Simple cycle CT-electrical generator (Unit 6B)
047	Simple cycle CT-electrical generator (Unit 6C)
048	Simple cycle CT-electrical generator (Unit 6D)
049	Simple cycle CT-electrical generator (Unit 6E)
053	Simple cycle CT-electrical generator (Unit 6A)

**A.1.** The Phase II Acid Rain Part application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain units must comply with the standard requirements and special provisions set forth in the application listed below:

a. DEP Form No. 62-210.900(1)(a), dated 02/22/18, received 03/29/18.  
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

**A.2.** Sulfur Dioxide (SO<sub>2</sub>) Emission Allowances. SO<sub>2</sub> emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.

b. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.

c. Allowances shall be accounted for under the Federal Acid Rain Program.  
[Rule 62-213.440(1)(c)1., 2. & 3., F.A.C.]

**A.3.** Comments, Notes, and Justifications: None.

[Table of Contents](#)

**SECTION IV. ACID RAIN PART.****Federal Acid Rain Provisions**

# Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30, 72.31, and 74; and Chapter 62-214, F.A.C.

This submission is: ☐ New ☐ Revised ☒ Renewal

**STEP 1**

Identify the source by plant name, state, and ORIS or plant code.

Plant name ; LAUDERDALE	State Florida	000613 ORIS/Plant Code
-------------------------	---------------	---------------------------

**STEP 2**

Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a."

If unit a SO<sub>2</sub> Opt-in unit, enter "yes" in column "b".

For new units or SO<sub>2</sub> Opt-in units, enter the requested information in columns "d" and "e."

a	b	c	d	e
Unit ID#	SO <sub>2</sub> Opt-in Unit? (Yes or No)	Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	New or SO <sub>2</sub> Opt-in Units Commence Operation Date	New or SO <sub>2</sub> Opt-in Units Monitor Certification Deadline
4GT1	NO	YES		
4GT2	NO	YES		
5GT1	NO	YES		
5GT2	NO	YES		
PFL 6A	NO	YES		
PFL 6B	NO	YES		
PFL 6C	NO	YES		
PFL 6D	NO	YES		
PFL 6E	NO	YES		

## SECTION IV. ACID RAIN PART.

### Federal Acid Rain Provisions

Plant Name (from STEP 1) LAUDERDALE

#### STEP 3

Read the  
standard  
requirements.

#### Acid Rain Part Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain Part application (including a compliance plan) under 40 CFR Part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
  - (ii) Submit in a timely manner any supplemental information that the DEP determines is necessary in order to review an Acid Rain Part application and issue or deny an Acid Rain Part;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain Part application or a superseding Acid Rain Part issued by the DEP; and
  - (ii) Have an Acid Rain Part.

#### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.
- (4) For applications including a SO<sub>2</sub> Opt-In unit, a monitoring plan for each SO<sub>2</sub> Opt-In unit must be submitted with this application pursuant to 40 CFR 74.14(a). For renewal applications for SO<sub>2</sub> Opt-In units include an updated monitoring plan if applicable under 40 CFR 75.53(b).

#### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000, or the deadline for monitor certification under 40 CFR Part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain Part application, the Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

#### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the DEP:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. In accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and

**SECTION IV. ACID RAIN PART.**  
**Federal Acid Rain Provisions**

Plant Name (from STEP 1) **LAUDERDALE**

**STEP 3,**  
**Continued.**

**Recordkeeping and Reporting Requirements (cont)**

- (iv) Copies of all documents used to complete an Acid Rain Part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72, Subpart I, and 40 CFR Part 75.

**Liability.**

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

**Effect on Other Authorities.**

No provision of the Acid Rain Program, an Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.

**STEP 4**  
**For SO<sub>2</sub> Opt-in**  
**units only.**

In column "f" enter the unit ID# for every SO<sub>2</sub> Opt-in unit identified in column "a" of STEP 2.

For column "g" describe the combustion unit and attach information and diagrams on the combustion unit's configuration.

In column "h" enter the hours.

f	g	h (not required for renewal application)
Unit ID#	Description of the combustion unit	Number of hours unit operated in the six months preceding initial application

**SECTION IV. ACID RAIN PART.**  
**Federal Acid Rain Provisions**

Plant Name (from STEP 1) LAUDERDALE

**STEP 5**

For SO<sub>2</sub> Opt-in units only.  
(Not required for SO<sub>2</sub> Opt-in renewal applications.)

In column "i" enter the unit ID# for every SO<sub>2</sub> Opt-in unit identified in column "a" (and in column "f").

For columns "j" through "n," enter the information required under 40 CFR 74.20-74.25 and attach all supporting documentation required by 40 CFR 74.20-74.25.

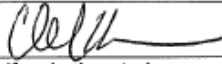

i	j	k	l	m	n
Unit ID#	Baseline or Alternative Baseline under 40 CFR 74.20 (mmBtu)	Actual SO <sub>2</sub> Emissions Rate under 40 CFR 74.22 (lbs/mmBtu)	Allowable 1985 SO <sub>2</sub> Emissions Rate under 40 CFR 74.23 (lbs/mmBtu)	Current Allowable SO <sub>2</sub> Emissions Rate under 40 CFR 74.24 (lbs/mmBtu)	Current Promulgated SO <sub>2</sub> Emissions Rate under 40 CFR 74.25 (lbs/mmBtu)

**STEP 6**

For SO<sub>2</sub> Opt-in units only.

Attach additional requirements, certify and sign.

- A. If the combustion source seeks to qualify for a transfer of allowances from the replacement of thermal energy, a thermal energy plan as provided in 40 CFR 74.47 for combustion sources must be attached.  
 B. A statement whether the combustion unit was previously an affected unit under 40 CFR 74.  
 C. A statement that the combustion unit is not an affected unit under 40 CFR 72.6 and does not have an exemption under 40 CFR 72.7, 72.8, or 72.14.  
 D. Attach a complete compliance plan for SO<sub>2</sub> under 40 CFR 72.40.  
 E. The designated representative of the combustion unit shall submit a monitoring plan in accordance with 40 CFR 74.61. For renewal application, submit an updated monitoring plan if applicable under 40 CFR 75.53(b).  
 F. The following statement must be signed by the designated representative or alternate designated representative of the combustion source: "I certify that the data submitted under 40 CFR Part 74, Subpart C, reflects actual operations of the combustion source and has not been adjusted in any way."

Signature 	Date 2/22/2018
<b>Certification (for designated representative or alternate designated representative only)</b>	
I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.	
Name Christian Kiernan	Title Environmental Services Director/Designated Representative
Owner Company Name Florida Power & Light	
Phone 561-691-2781	E-mail address: Christian.Kiernan@fpl.com
Signature 	Date 2/22/2018