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Authorized Representative:
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Air Permit No. 0110036-010-AC
Permit Expires: May 1, 2017
Minor Air Construction Permit

Port Everglades Next Generation
Clean Energy Center (PEEC)

PROJECT

This is the final air construction permit, which authorizes the construction of one nominal 1,250 megawatts (MW) combined cycle unit and ancillary equipment at the FPL Port Everglades Plant. Four existing fossil fuel-fired steam generators with a total nominal capacity of 1,200 MW will be shut down and dismantled as part of this project.

The facility is a power plant under Standard Industrial Classification No. 4911 and is located in Broward County at 8100 Eisenhower Boulevard in Fort Lauderdale, Florida. The UTM coordinates are Zone 17, 587.38 km East and 2885.25 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, no changes or clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida
Division of Air Resource Management
Office of Permitting and Compliance
(Electronic Signature)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

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Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.
(Electronic Signature)

FACILITY DESCRIPTION

The FPL Port Everglades Plant currently consists of four fossil fuel steam generator that together produce approximately 1,200 megawatts (MW) of electrical power and 12 small simple cycle combustion turbine generators (CTGs) that together produce approximately 504 MW. The steam generators use residual fuel oil and natural gas and exhaust through four 344-foot stacks. The small CTGs use natural gas and No. 2 fuel oil and exhaust through 44-foot stacks. There are fuel oil storage tanks, water intake structures for once-through cooling and other ancillary equipment.

PROPOSED PROJECT

The project includes the construction of a nominal 1,250 MW natural gas-fueled combined cycle unit (Unit 5) and requires the permanent shutdown and dismantling of the four fossil fuel steam generators. The new unit (Unit 5) will be called the Port Everglades Next Generation Clean Energy Center and abbreviated as PEEC.

Unit 5 will consist of three nominal 250 MW CTGs and three heat recovery steam generators (HRSG). The HRSG will utilize the waste heat from the combustion turbines to produce steam to be utilized in a single nominal 500 MW steam turbine generator. Each of the three CTG/HRSG sets will exhaust through a 149-foot stack.

The primary fuel for Unit 5 will be natural gas and ultralow sulfur distillate (ULSD) fuel oil will be used as backup fuel. Additional ancillary equipment to be installed includes: an auxiliary boiler; two temporary boilers used during construction; two emergency generators; a diesel fire pump; two process heaters; and a gas compression station. Details of the equipment to be installed are listed below.

This project will add the following emissions units (EU).

Facility ID No. 0110036

EU No.	Emission Unit Description
020	Unit 5A – One nominal 250 MW CTG and HRSG
021	Unit 5B – One nominal 250 MW CTG and HRSG
022	Unit 5C – One nominal 250 MW CTG and HRSG
023	One natural gas fueled auxiliary boiler rated at 99.8 MMBtu/hour heat input [higher heating value (HHV)] or less
024	Two nominal 9.9 MMBtu/hour (HHV) natural gas-fired process heaters (one is a spare)
025	Three 5,514 horsepower (hp) natural gas compressor stations
026	One 2,250 kilowatts (kW) emergency generator firing ULSD fuel oil
027	One 2,250 kW emergency generator firing ULSD fuel oil
028	Two temporary natural gas or ULSD fuel oil fired boilers rated at 150 MMBtu/hour (HHV)
029	One nominal 300 hp emergency diesel fire pump engine
030	One nominal 7 million gallon distillate fuel oil storage tank.

REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is subject to the Clean Air Interstate Rule (CAIR) in accordance with the Final Department Rules issued pursuant to CAIR as implemented by the Department in Rule 62-296.470, F.A.C.
- The facility is a major stationary source in accordance with Department Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration (PSD).
- The proposed project does not trigger a PSD review and a requirement to conduct a Best Available Control Technology (BACT) pursuant to Department Rule 62-212.400, F.A.C.
- The proposed project includes units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations Part 60 (40 CFR 60).
- The proposed project includes units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.
- The project is subject to certification under the Florida Power Plant Siting Act, 403.501-518, F.S. and Chapter 62-17, F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Program of the Broward County Environmental Protection and Growth Management Department: 1 North University Drive, 102A, Plantation, Florida 33324.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix Subpart A (NSPS Subpart A and NESHAP Subpart A); Appendix Db (NSPS Subpart Db); Appendix Dc (NSPS Subpart Dc); Appendix IIII (NSPS Subpart IIII); Appendix KKKK (NSPS Subpart KKKK); Appendix XS (Semiannual NSPS Excess Emission Report); Appendix ZZZZ (NESHAP Subpart ZZZZ); and Appendix DDDDD (NESHAP Subpart DDDDD).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.
[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

A. UNIT 5 – COMBUSTION TURBINE GENERATORS (EU 020, 021, and 022)

This section of the permit addresses the following emission units.

Unit 5 (EU Nos. 020, 021 and 022)
Description: Unit 5 will be comprised of EU Nos. 020, 021, and 022. Each EU will consist of: a combustion turbine generator (CTG) with automated control; inlet air filtration system and inlet air-cooling system; gas-fired heat recovery steam generator (HRSG); a HRSG stack; and associated support equipment. The project also includes one steam turbine generator (STG) that will serve the combined cycle unit. **Fuels:** Each CTG fires natural gas as the primary fuel and ultralow sulfur distillate (ULSD) fuel oil as a restricted alternate fuel. **Generating Capacity:** Each of the three CTGs has a nominal generating capacity of 250 MW. The steam turbine generator has a nominal generating capacity of 500 MW. The total nominal generating capacity of the "3-on-1" combined cycle unit is approximately 1,250 MW. **Design Heat Input Rating:** The design heat input rating of each CTG is 2,580 MMBtu/hour when firing natural gas and 2,353 MMBtu/hour when firing fuel oil based on a compressor inlet air temperature of 59 degrees Fahrenheit (°F), 60 percent (%) relative humidity, 14.7 pounds per square inch (psi) pressure, the lower heating value (LHV) of each fuel and 100% load. Actual heat input rate will vary depending upon gas turbine characteristics, ambient conditions and inlet air-cooling. **Controls:** Inherently clean fuels, lean premix combustion technology such as Dry Low-NO_X (DLN) for gas firing, wet injection for ULSD fuel oil firing and selective catalytic reduction (SCR). **Stack Parameters:** Each HRSG has a stack height of 149 feet with an exit diameter of 22 feet. **Continuous Monitors:** Each stack is equipped with a continuous emissions monitoring system (CEMS) to measure and record nitrogen oxides (NO_X) as well as flue gas oxygen (O_2) or carbon dioxide (CO_2) content.

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: The CTGs shall comply with the applicable NSPS in 40 CFR 60, including: Subpart A (General Provisions) and Subpart KKKK (Standards of Performance for Stationary Gas Turbines). See Appendix Subpart A and Appendix KKKK. [Rule 62-204.800(7)(b), F.A.C.; 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK]

EQUIPMENT

2. Combustion Turbine Generators: The permittee is authorized to install, tune, operate, and maintain three CTGs each with a nominal generating capacity of 250 MW. Each CTG shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an inlet air-cooling system. [Application No. 0110036-010-AC]

3. Heat Recovery Steam Generators: The permittee is authorized to install, operate, and maintain three HRSG with separate exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the three CTGs (5A to 5C) and deliver steam to the steam turbine generator. [Application No. 0110036-010-AC]

4. Emission Controls

   a. *Dry Low NO_X (DLN) Combustion*: The permittee shall employ lean premix (also called DLN) technology within the combustors and an automated control system to control NO_X emissions from each CTG when firing natural gas. The DLN combustors and automated control system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below.

   b. *Wet Injection*: The permittee shall install, operate, and maintain a wet injection system (water or steam) to reduce NO_X emissions from each CTG when firing ULSD fuel oil. The wet injection systems shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below.

   c. *Selective Catalytic Reduction (SCR) System*: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions from each CTG when firing natural gas or distillate fuel oil. The SCR system consists of an ammonia injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment.

   d. *Ammonia Storage:* In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.

[Application No. 0110036-010-AC]

PERFORMANCE RESTRICTIONS

5. Manufacturer's Performance Curves: The permittee shall provide manufacturer's performance curves (or equations) that correct combustion turbine design heat input rating and operation for site conditions to the Permitting and Compliance Authorities within 45 days of completing 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.
   [Rule 62-210.200(Potential to Emit - PTE), F.A.C.

6. Authorized Fuel: The CTGs shall fire natural gas as the primary fuel, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF) of natural gas. As a restricted alternate fuel, the CTGs may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

7. Operation: The hours of operation of Unit 5 are not limited (8,760 hours per year). ULSD fuel oil may be fired up to the fuel equivalent of 3,000 hours aggregated over the three CTGs during any calendar year. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

8. Emissions Standards: Emissions from each CTG set shall not exceed the following emission standards.

Pollutant	Fuel	Emission Standard [a,b]	Basis	Compliance Demonstration [c]
NO_X	Oil	8.0 ppmvd @15% O_2	Application	30 unit rolling operating days (Compliance by CEMS)
		42 ppmvd @15% O_2	Subpart KKKK	
	Gas	2.0 ppmvd @15% O_2	Application	
		15 ppmvd @15% O_2	Subpart KKKK	
CO	Oil	35.0 ppmvd @15% O_2	Application Avoids PSD	Initial Stack Test Only
		195 lb/hour		
	Gas	9.0 ppmvd @15% O_2	Application Avoids PSD	Initial Stack Test Only
		56.2 lb/hour		
VOC	Oil	10.0 ppmvd @15% O_2	Application Avoids PSD	Initial Stack Test Only
		37.0 lb/hour		
	Gas	1.2 ppmvd @15% O_2	Application Avoids PSD	Initial Stack Test Only
		4.1 lb/hour		
SO_2 [d]	Oil, Gas	2.0 gr. sulfur/100 SCF gas 0.0015% sulfur fuel oil [f]	Application Subpart KKKK	Fuel Record Keeping
$PM/PM_{10}/PM_{2.5}$ [e]	Oil, Gas	2.0 gr. sulfur/100 SCF gas 0.0015% sulfur fuel oil [f]	Application Avoids PSD	Fuel Record Keeping
		10 percent opacity		Initial and Annual Visible Emissions Test [g]

a. Concentration standards are expressed as parts per million, by volume, dry at 15 percent oxygen and abbreviated as ppmvd @15% O_2.
b. The mass emission rate standards are expressed as pounds per hour (lb/hour) and are based on a turbine inlet condition of 59°F, no inlet air-cooling, and 100% load. The results and may be adjusted to actual test conditions in accordance with the performance curves and/or equations filed with the Department.
c. "Unit operating day" means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period. [40 CFR 60.4420]
d. The applicant requested the stated sulfur fuel limits. These satisfy the emission standards contained in NSPS Subpart KKKK.
e. The fuel sulfur specifications combined with the low NO_X emission limit, efficient combustion design and operation of the combustion turbines effectively limit the potential $PM/PM_{10}/PM_{2.5}$ emissions. Compliance with the fuel specifications and visible emission standards shall serve as indicators of good combustion.
f. Compliance with the fuel sulfur specifications shall be determined by the methods for determination of fuel sulfur as detailed in Condition 25 of this permit.
g. Compliance with the 10% opacity standard shall be demonstrated by conducting 30-minute tests in accordance with EPA Method 9 - Visual Determination of Opacity.

[Application No. 0110036-010-AC; Avoidance of Rule 62-212.400(4) through (12), F.A.C.; 40 CFR 60 Subpart KKKK]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 8 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

9. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, fuel switches, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity.
[Application No. 0110036-010-AC; Rule 62-4.070(3), F.A.C.]

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.
    [Rule 62-210.200(Definitions), F.A.C.]

    b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.
    [Rule 62-210.200(Definitions), F.A.C.]

    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(Definitions), F.A.C.]

11. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

12. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, fuel switching 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 CTG/HRSG system, excess emissions of NO_X resulting from startup, shutdown, or malfunction shall be excluded from 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):

    a. *STG/HRSG System Cold Startup*: For cold startup of the steam turbine system, excluded emissions from any CTG/HRSG system shall not exceed eight (8) hours in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 3-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 48 hours.

    {Permitting Note: During a cold startup of the STG system, each CTG/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the STG and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}

    b. *CTG/HRSG System Cold Startup*: For cold startup of a CTG/HRSG system, excluded emissions shall not exceed four (4) hours in any 24-hour period. "Cold startup of a CTG/HRSG system" is defined as a startup after the pressure in the high-pressure (HP) steam drum falls below 450 psig for at least a one-hour period.

c. *CTG/HRSG System Warm Startup*: For warm startup of a CTG/HRSG system, excluded emissions shall not exceed two (2) hours in any 24-hour period. "Warm startup of a CTG/HRSG system" is defined as a startup after the pressure in the HP steam drum is above 450 psig.

d. *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, excluded emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.

e. *CTG/HRSG System Shutdown*: For shutdown of the gas turbine/HRSG operation, excluded emissions from any gas turbine/HRSG system shall not exceed two hours in any 24-hour period.

f. *Fuel Switching*: For fuel switching, excluded emissions shall not exceed two (2) hours in any 24-hour period for each fuel switch and no more than four hours in any 24-hour period for any gas turbine/HRSG system.

g. *Documented Malfunction*: For the gas turbine/HRSG system, excess emissions of NO_x 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.

13. Combustor Tuning: CEMS data collected during initial or other major combustor tuning sessions and during manufacturer required Full Speed No Load (FSNL) trip tests shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least one working (business) day that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail. [Design; Rule 62-4.070(3), F.A.C.]

TESTING REQUIREMENTS

14. Operating Rate During Testing: Initial and annual stack tests shall be conducted at 90% or greater of the design heat input ratings provided in emissions unit description above 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 Condition 8, footnote b above) 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%. [Rule 62-297.310, F.A.C.; 40 CFR 60.8]

15. Initial Compliance Demonstration: Initial compliance stack tests while *firing natural gas* shall be conducted or commence (based on averaging period) within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup. Initial testing *on fuel oil* shall be conducted or commence (based on averaging period) within 60 days of any fuel oil firing in the CTG. In accordance with the test methods specified in this permit, the combustion turbines shall be tested to demonstrate initial compliance with the mass emission rate standards for NO_X, CO, VOC and with the visible emissions standard. [Rules 62-4.070, 62-297.310(7)(a), F.A.C.; 40 CFR 60.8]

16. Subsequent Compliance Testing: Annual compliance tests for visible emissions shall be conducted during each federal fiscal year (October 1st to September 30th) while firing natural gas. Visible emissions tests shall also be performed while firing fuel oil, on each combustion turbine that is fired with fuel oil, for more than 400 hours during the federal fiscal year.

{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. The Department retains the authority to require VOC testing for the reasons given in Appendix C, Condition 10, Special Compliance Tests.}

[Rules 62-4.070(3) and 62-297.310(7)(a)4, F.A.C.]

17. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 30-unit operating days rolling average NO_X emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60 Subpart KKKK]

18. Compliance for $PM/PM_{10}/PM_{2.5}$: In stack compliance testing is not required for $PM/PM_{10}/PM_{2.5}$. Compliance with the limits and control requirements is based on the fuel sulfur recordkeeping required in Specific Condition 25, the visible emissions standard and CEMS for NO_X (which is a $PM_{2.5}$ and condensable PM precursor). [Rule 62-4.070(3), F.A.C.]

19. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

20. Test Methods: Required initial and annual compliance stack tests shall be performed in accordance with the following reference methods.

Method	Description of Method [a]
7E	Determination of NO_X Emissions from Stationary Sources (Instrumental Analyzer Procedure)
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of CO Emissions from Stationary Sources
18 [b]	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography
25A [b]	Determination of Total Gaseous Organic Concentration using Flame Ionization Analyzer

a. The 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 for compliance testing unless prior written approval is received from the Department's Office of Permitting and Compliance in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
b. EPA Method 25A is used to determine VOC. EPA Method 18 may be used to determine and deduct emissions of methane and ethane from the emissions measured using Method 25A when determining VOC emissions.

[Rule 62-204.800 F.A.C.; Rule 62-297.100 F.A.C.; 40 CFR 60 Appendix A]

MONITORING REQUIREMENTS

21. Continuous Emissions Monitoring System(s) (CEMS): The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of NO_X from the combined cycle CTGs in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a NO_X standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

a. *NO_X Monitors:* Each NO_X monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_X monitor shall be performed using EPA Method 20 or 7E in Appendix A of 40 CFR 60.

b. *Diluent Monitors:* The O_2 or carbon dioxide (CO_2) content of the flue gas shall be monitored at the location where NO_X are monitored to correct the measured emissions rates to 15% oxygen. If a CO_2 monitor is installed, the O_2 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.

22. CEMS Data Requirements:

a. *Data Collection*: Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd corrected to 15% O_2. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for NO_X as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to International Organization of Standardization (ISO) conditions.

b. *Valid Hour*: Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value 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, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values.

c. *30-Unit Operating Day Rolling Averages*: Compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days. For purposes of determining compliance with the 30-unit operating day rolling CEMS standards, the missing data substitution methodology of 40 CFR Part 75 Subpart D, shall not be utilized. Instead, the 30-unit operating day rolling average shall be determined using the remaining hourly data in the 30-day rolling period.

{Permitting Note: There may be more than one 30-unit operating day compliance demonstration required for NO_X emissions depending on the use of alternate fuels.}

d. *Data Exclusion:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches and combustor tuning. Some of the CEMS emissions data recorded during these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 12 and 13 of this section. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown, malfunction, fuel switches, combustor tuning) may be used for the appropriate exclusion periods. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during such episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited.

e. *Availability*: Monitor availability for the CEMS shall be 95% or greater in any calendar quarter. The quarterly excess emissions report shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Department's Compliance Authority.

[Rule 62-297.520, F.A.C.; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR Part 51 Appendix P; 40 CFR 60 Appendix B - Performance Specifications; 40 CFR 60 Appendix F - Quality Assurance Procedures; Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

23. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each CTG and HRSG system on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction and fuel switching). Such monitoring shall be made using a monitoring component of the CEMS required above, or by monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rule 62-4.070(3), F.A.C.]

24. Monthly Operations Summary: By the fifth calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for each CTG for the previous month of operation: fuel consumption, hours of operation, and the updated 12-month rolling 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. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3), F.A.C.]

25. Fuel Sulfur Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a. *Natural Gas:* 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.

b. *ULSD Fuel Oil:* Compliance with the distillate 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 a 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. [Rule 62-4.070(3), F.A.C; Rule 62-4.160(15), F.A.C.]

26. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. and in Appendix C of this permit. [Rule 62-297.310(8), F.A.C.]

27. Excess Emissions Reporting:

a. *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.

b. *SIP Quarterly Permit Limits Excess Emissions Report*: Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of NO_X emissions in excess of the SIP permit emission standards, and the amount of authorized data excluded following the format in Appendix XS attached to this permit. Periods of startup, shutdown, malfunction, fuel switching and tuning shall be monitored and recorded at all times. In addition, the report shall summarize the CEMS systems monitor availability for the previous quarter.

c. *NSPS Semi-Annual Excess Emissions Reports*: For purposes of reporting emissions in excess of NSPS Subpart KKKK, excess emissions from the CTGs are defined as: a specified averaging period over which either the NO_X emissions are greater than 15 ppm at 15% O_2 on a 30-day rolling average while firing natural gas and greater than 42 ppm at 15% O_2 on a 30-day rolling average while firing ultra low sulfur fuel; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 40 CFR 60.4330. Within thirty (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.

{Note: If there are no periods of excess emissions as defined in NSPS Subpart KKKK, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semi-Annual Report.}

[Rule 62-4.130, F.A.C.; Rule 62-204.800, F.A.C.; Rule 62-210.700(6), F.A.C.; 40 CFR 60.7; 40 CFR 60.4420]

28. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility. The permittee shall also keep records sufficient to determine the annual throughput of ULSD fuel oil for the fuel oil storage tank for use in the Annual Operating Report. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(2), F.A.C.]

B. AUXILIARY BOILER AND TEMPORARY CONSTRUCTION BOILERS (023 AND 028)

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
023	One natural gas fueled auxiliary boiler rated at 99.8 MMBtu/hour heat input (HHV) or less
028	Two temporary natural gas or ULSD oil fueled construction boilers rated at 150 MMBtu/hour (HHV)

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements:
   a. *Auxiliary Boiler:* The natural gas fueled auxiliary boiler is subject to the applicable requirements of NSPS Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Specifically, this emission unit shall comply with 40 CFR 60.48c Reporting and Recordkeeping Requirements. Initial notification is required for the auxiliary boiler pursuant to NSPS Subpart A, Section 60.7.
   [Rules 62-204.800(8)(d); Rule 62-204.800(8)(b)4., F.A.C.; NSPS Subpart A; NSPS Subpart Dc]
   b. *Temporary Construction Boilers:* If applicable, the two temporary 150 MMBtu (HHV) natural gas or ULSD fuel oil boilers are subject to the requirements of NSPS Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

   {Permitting Note: The NSPS Subpart Db would only apply if the temporary construction boiler meets the applicability. The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

   [Rules 62-204.800(8)(d), F.A.C; Rule 62-204.800(8)(b)3., F.A.C.; NSPS Subpart A; NSPS Subpart Db]

2. NESHAP Requirements: The auxiliary boiler and the two temporary construction boilers are subject to the applicable requirements of NESHAP Subpart A – General provisions and Subpart DDDDD – NESHAP for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters.
   [Rules 62-204.800(11)(d)1., F.A.C.; NESHAP Subpart A; NESHAP Subpart DDDDD]

3. BACT Determinations: Determinations of the Best Available Control Technology (BACT) were conducted for SO_2 and PM pursuant to Department requirements for Fossil Fuel Steam Generators with less than 250 MMBtu/hour heat input fossil fuel boilers.

   {Permitting Note: These BACT determinations are not pursuant to the Department's BACT requirements pursuant to Rule 62-212.400, F.A.C. – PSD}

   [Rule 62-296.406(2) and (3), F.A.C.]

EQUIPMENT

4. Auxiliary Boiler: The permittee is authorized to install, operate, and maintain one natural gas fueled auxiliary boiler with a design heat input of capacity 99.8 MMBtu/hour (HHV) and a nominal steam rating of 85,000 lb/hour. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

5. Temporary Construction Boilers: The permittee is authorized to install, operate, and maintain two natural gas or ULSD fuel oil fired temporary construction boilers, each with a heat input capacity of 150 MMBtu/hour (HHV). [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

B. AUXILIARY BOILER AND TEMPORARY CONSTRUCTION BOILERS (023 AND 028)

OPERATION RESTRICTIONS

6. Auxiliary Boiler Operation: The hours of operation of the auxiliary boiler shall not exceed 2,000 hours/year. [Application No. 0110036-010-AC; 62-210.200(PTE), F.A.C.]

7. Temporary Construction Boiler Operation: The two temporary construction boilers are allowed to operate a combined total of 3,000 hours/year. The temporary boilers shall not operate beyond the expiration date of this permit. [Application No. 0110036-010-AC]

EMISSION STANDARDS

8. Auxiliary Boiler Emission Standards:
   a. *Visible Emissions:* Visible emissions shall not exceed 20 percent opacity except for one six-minute period per hour during which opacity shall not exceed 27 percent.
   b. *Fuel Specifications:* The auxiliary boiler shall fire only natural gas with a maximum sulfur content of 2.0 gr/100 SCF.

   {Permitting Note: NSPS Subpart Dc does not contain any emission standards for units firing only natural gas. NESHAP Subpart DDDDD contains only work practice standards such as annual tune-ups in lieu of emission standards for units firing only natural gas.}

   [Application No. 0110036-010-AC; Rule 62-296.406(1), (2) and (3), F.A.C. – Visible Emissions and BACT for PM and SO_2]

9. Temporary Construction Boiler Emission Standards:
   a. *Visible Emissions:* Visible emissions shall not exceed 20 percent opacity except for one six-minute period per hour during which opacity shall not exceed 27 percent.
   [Application No. 0110036-010-AC; Rule 62-296.406(1), F.A.C. – Visible Emissions]
   b. *Fuel Specifications*: The two temporary construction boilers shall fire only natural gas with a maximum sulfur content of 2.0 gr/100 SCF or ULSD fuel oil with a sulfur content of 0.0015 percent.
   [Application No. 0110036-010-AC; Rule 62-296.406(2) and (3), F.A.C. – BACT for PM and SO_2]
   c. *NO_X:* If NSPS Subpart Db is applicable, emissions of NO_X (expressed as NO_2) from the two temporary construction boilers shall not exceed 0.10 lb/MMBtu heat input on a 30-day rolling basis.
   [Rule 62-204.800(8)(b)3., F.A.C.; NSPS Subpart Db, Section 60.44b(a)(1)(i)]

   {Permitting Note: The NSPS Subpart Db would only apply if the temporary construction boiler meets the applicability. The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). NESHAP Subpart DDDDD was promulgated on March 21, 2011. On December 23, 2011 EPA published notice of a full consideration of NESHAP Subpart DDDDD that is expected to be finalized by Summer 2012 thus replacing the previous version. NESHAP Subpart DDDDD does not apply to "temporary boilers" as defined in the subpart.}

TESTING REQUIREMENTS

10. Auxiliary Boiler Testing Requirements: The auxiliary boiler shall be tested to demonstrate initial compliance with the emission standard for visible emissions. The tests shall be conducted using EPA Method 9 within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. [Rule 62-297.310(7)(a)1, F.A.C.]

11. Temporary Construction Boiler Testing Requirements:
    a. *Visible Emissions:*

       Initial Test: The temporary construction boilers shall be tested to demonstrate initial compliance with the emission standard for visible emissions. The tests shall be conducted using EPA Method 9 within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup.
       [Rule 62-297.310(7)(a)1, F.A.C.]

       Continuous Opacity Monitoring System (COMS): If NSPS Subpart Db is applicable, in accordance with 40 CFR 60.48b(a) the permittee shall install, calibrate, operate and maintain a COMS to continuously monitor and record opacity from the steam generating unit. The COMS shall be certified pursuant to 40 CFR 60 Appendix B, Performance Specification 1. In lieu of COMS, the applicant can submit a site-specific opacity monitoring plan to the Department for approval.

    b. *NO_X:* If NSPS Subpart Db is applicable, the permittee shall install, calibrate, maintain and operate a NO_X-CEMS in accordance with 40 CFR 60, Appendix B, PS-2 and Appendix F and for the purpose of demonstrating compliance with the emission standard of 0.10 lb/MMBtu on a 30-day rolling basis.
       [Rule 62-204.800(8)(b)3., F.A.C.; NSPS Subpart Db, Section 60.46b]

12. Reporting: The permittee shall maintain records of the amount of natural gas used in the auxiliary boiler and the temporary construction boilers. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C.]

C. PROCESS HEATERS (EU 024)

This section of the permit addresses the following emissions unit.

EU No.	Emissions Unit Description
024	Two nominal 9.9 MMBtu/hour (HHV) natural gas-fired process heaters (one is a spare)

1. Equipment: The permittee is authorized to install, operate, and maintain two 9.9 MMBtu/hour (HHV) process heaters for the purpose of heating the natural gas supply to the CTGs. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation: The two natural gas-fueled process heaters are allowed to operate a combined total of 8,760 hours/year. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

3. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas used in the process heaters. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C]

E. EMERGENCY GENERATORS (EU 026 AND 027)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
025	Three nominal 5,514 horsepower (hp) natural gas fueled combustion turbine-compressors
Design Heat Input Rating: The design heat input rating of each combustion turbine-compressor is 56.6 MMBtu/hr based on turbine inlet conditions at 59°F, HHV of natural gas and 100% load (51.4 MMBtu/hr, LHV). Actual heat input rate will vary depending upon gas turbine characteristics and ambient conditions.	

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: The combustion turbine-compressors shall comply with the applicable NSPS in 40 CFR 60, including: Subpart A - General Provisions and Subpart KKKK - Standards of Performance for Stationary Gas Turbines. See Appendix Subpart A and Appendix KKKK.
[Rule 62-204.800(7)(b), F.A.C.; 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK]

EQUIPMENT

2. Combustion Turbine Compressors: The permittee is authorized to install, tune, operate, and maintain three nominal 5,514 hp natural gas fueled combustion turbine-compressors.
[Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS CONTROL

3. Lean Premix Combustion: The permittee shall employ lean premix combustion technology such as DLN, SoLoNO_X, or Dry Low Emissions (DLE) to control NO_X emissions and sufficiently high combustion temperature to control CO emissions.
[Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

4. Authorized Fuel: The combustion turbine-compressors shall only fire natural gas, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr/100 SCF) of natural gas.
[Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

5. Hours of Operation and Fuel Specifications: The three combustion turbine-compressors are allowed to operate a combined total of 17,520 hr/yr.
[Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

6. NSPS Subpart KKKK Applicability: The compressors shall comply with all applicable requirements of 40 CFR 60 listed below, adopted by reference in Rule 62-204.800(8)(b)78, F.A.C.
[40 CFR 60 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines]

7. Emissions Standards: Each combustion turbine-compressor shall comply with the following emission limits.

Pollutant	Emission Standard	Basis	Compliance [a]
NO_X	15.0 ppmvd @15% O_2	Application	30 unit rolling operating days (Compliance by CEMS)
	25 ppmvd @15% O_2	Subpart KKKK	
CO	25.0 ppmvd @15% O_2	Application, Avoids PSD	Initial Stack Test Only
SO_2 [b]	2.0 gr. sulfur/100 SCF gas [b]	Application Subpart KKKK	Fuel Record Keeping
$PM/PM_{10}/PM_{2.5}$ [c]	2.0 gr. sulfur/100 SCF gas	Application, Avoids PSD	Fuel Record Keeping
	10 percent opacity [d]		Initial and Annual Visible Emissions Test

a. "Unit operating day" means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period. [40 CFR 60.4420]
b. The applicant requested the stated sulfur fuel limits. These satisfy the emission standards contained in NSPS Subpart KKKK. Compliance with the fuel sulfur specifications shall be determined by the methods for determination of fuel sulfur as detailed in Section 3. A. Condition 25 of this permit.
c. The fuel sulfur specifications combined with the low NO_X emission limit, efficient combustion design and operation of the combustion turbines effectively minimize potential $PM/PM_{10}/PM_{2.5}$ emissions. Compliance with the fuel specifications and visible emission standards shall serve as indicators of good combustion.
d. Compliance with the 10% opacity standard shall be demonstrated by conducting 30-minute tests in accordance with EPA Method 9 - Visual Determination of Opacity.

[Application No. 0110036-010-AC; 40 CFR 60 Subpart KKKK]

8. Compressor Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup.
[Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8; 40 CFR 60.4400]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
20	Determination of NO_X, SO_2 and diluents emissions from stationary CTs
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources

[Rule 62-4.070(3), F.A.C.; 40 CFR 60 Subpart KKKK; 40 CFR 60.8]

10. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas used in the compressor station and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 60.44375 and 40 CFR 60.7. These records shall be submitted to the Compliance Authority on an annual basis or upon request.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK]

E. EMERGENCY GENERATORS (EU 026 AND 027)

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

EU No.	Brief Description
026 and 027	Two 2,250 kilowatts (kW) emergency generators (model year 2011 and later)

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS, Subpart IIII Applicability: The emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and are subject to 40 CFR 60 Subpart IIII. The applicant shall comply with 40 CFR 60 Subpart IIII only to the extent that the regulations apply to the emission unit and its operations (e.g. non-road, emergency, displacement, capacity and model year selected). [40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; Rule 62-204.800(8)(b)79., F.A.C.]

2. NESHAP, Subpart ZZZZ Applicability: The emergency generators are Stationary Reciprocating Internal Combustion Engines located at a major source of hazardous air pollutants emissions and are subject to 40 CFR 63 Subpart ZZZZ. Because these emergency generators are subject to regulation under 40 CFR 60 Subpart IIII, Subpart ZZZZ only requires that the emergency generators meet the requirements of 40 CFR 60 Subpart IIII. No further requirements of Subpart ZZZZ apply to the emergency generators. [40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, section 63.6590(c); Rule 62-204.800(11)(b)82., F.A.C.]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain two fuel oil-fired emergency generators. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 100 hours/year/unit. The generators shall burn distillate fuel oil with a sulfur content of 15 parts per million (ppm) or less. [Application No. 0110036-010-AC; Rule 62-210.200(PTE), F.A.C.]

5. Emergency Generator Emission Limits:

Emergency Generator (> 560 kW)	**CO** (g/kW-hr)[1]	**PM** (g/kW-hr)	**NMHC[2]+NO_X** (g/kW-hr)	**Diesel Fuel[3]** (sulfur)
Model year 2011 and later	3.5	0.20	6.4	15 ppm

1. g/kW-hr means grams per kilowatt-hour.
2. NMHC means Non-Methane Hydrocarbons.
3. Nonroad diesel specification of 15 ppm is from 40 CFR part 80, subpart I – Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel.

[Application No. 0110036-010-AC; NSPS Subpart IIII]

6. Emergency Generator Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, and NO_X. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of this unit. As an alternative, an EPA certification of emissions characteristics of the purchased model that are at least as stringent as the NSPS Subpart IIII values and the use of ultralow sulfur distillate fuel oil or nonroad diesel fuel with a sulfur content of 15 ppm or less can be used to fulfill this requirement.
[Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8; 40 CFR 60.4211]

7. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxides Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources

NOTIFICATION, REPORTING AND RECORDS

8. Notifications: Initial notifications are required pursuant to 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590(b)(i) for the 2,250 kW emergency generators.

9. Reporting: The permittee shall maintain records of the amount of liquid fuel used. These records shall be submitted to the Compliance Authority on an annual basis or upon request.
[Rule 62-4.070(3), F.A.C.]

F. EMERGENCY FIRE PUMP (EU 029)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
029	One nominal 300 hp diesel fire pump engine

NSPS AND NESHAP APPLICABILITY

1. NSPS Subpart IIII Applicability: The pump engine is an Emergency Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

2. NESHAP Subpart ZZZZ Applicability: The pump engine is a Liquid Fueled Reciprocating Internal Combustion Engine (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the engines must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

EQUIPMENT SPECIFICATIONS

3. Engine Driven Fire Pumps: The permittee is authorized to install, operate, and maintain one nominal 300 hp emergency diesel fire pump engine. [Application No. 0110036-010-AC]

4. Hours of Operation: The fire pump may operate in response to emergency conditions and 100 non-emergency hours per year for maintenance testing.
[Application No. 0110036-010-AC; Rule 62-210.200 (PTE), F.A.C.]

EMISSION STANDARDS

5. Emissions Limits: The emergency fire pump engines shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII.
[40 CFR 60.4211 and Rule 62-4.070(3), F.A.C.]

Emergency Pumps (175 hp ≤ and < 600 hp)	**PM** [1] (g/hp-hr)	**NMHC** [2]**+NO_X** (g/hp-hr)	**Diesel Fuel** [3] (sulfur)
Subpart IIII (2009 and later)	0.15	3.0	15 ppm

1. g/hp-hr means grams per horsepower-hour.
2. Non-Methane Hydrocarbons
3. Nonroad diesel specification of 15 ppm is from 40 CFR part 80, subpart I – Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel.

[Application No. 0110036-010-AC; 40 CFR 60, NSPS Subpart IIII; and Rule 62-4.070(3), F.A.C.]

6. Fire Pump Engine Certification: Manufacturer certification shall be provided to the Department in lieu of actual testing. [40 CFR 60.4211; Rule 62-4.070(3), F.A.C.]

ONE 7-MILLION GALLON DISTILLATE FUEL OIL TANK (EU 030)

ID No.	Emission Unit Description
030	Nominal 7 Million Gallon Ultralow Sulfur Distillate Fuel Oil Storage Tank

NSPS APPLICABILITY

1. NSPS, Subpart Kb Applicability: Based on the true vapor pressure of ultralow sulfur distillate fuel (< 3.5 kilopascals), the storage tank **is not** subject to 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. [Application No. 0110036-010-AC; 40 CFR 60.110b(b)]

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to operate, and maintain one nominal 7 million gallon distillate fuel oil storage tank to provide fuel oil to Emission Units 020, 021, and 022 or to other units on the site. [Application No. 0110036-010-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. Hours of Operation: The hours of operation are not restricted (8,760 hours per year). [Application No. 0110036-010-AC]

NOTIFICATION, REPORTING AND RECORDS

4. Ultralow Sulfur Distillate Fuel Oil Records: The permittee shall keep readily accessible records showing the maximum true vapor pressure of the stored liquid. Compliance with this condition may be demonstrated by using the information from the respective manufacturers safety data sheets (MSDS) for the fuel oil stored in the tanks.
[Rule 62-4.070(3) F.A.C.; avoidance of 40 CFR 60, Subpart Kb]