FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
BOB MARTINEZ CENTER
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

JENNIFER CARROLL
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

PERMITTEE

Tampa Electric Company (TEC)
Post Office Box 111
Tampa, Florida 33601-0111

Authorized Representative:
Paul Carpinone, Director
Environmental Health and Safety

TEC Polk Power Station
Project No. 1050233-034-AC
Permit No. PSD-FL-421

SIC Code: 4911
Expires: January 1, 2018
Polk 2 Combined Cycle

PROJECT

This permit authorizes the construction of the Polk 2 Combined Cycle at the existing Polk Power Station. The Polk 2 Combined Cycle will be a "4-on-1" combined cycle unit with an electrical generating capacity of approximately 1,160 megawatts (MW). The project will utilize four existing 165 MW combustion turbine-electrical generators and will add four new heat recovery steam generators equipped with natural gas-fired duct burners, a single 500 MW steam turbine-electrical generator, a mechanical draft cooling tower, transmission upgrades and ancillary equipment. The existing Polk Power Station is located Polk County at 9895 State Road 37 South in Mulberry, Florida.

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.

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. as well as those 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
(Electronic Signature)

(DRAFT)

Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

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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.

Paul L. Carpinone, TEC: plcarpinone@tecoenergy.com
Karen A. Sheffield, TEC: kasheffield@tecoenergy.com
Tom Davis, P.E., ECT: tdavis@ectinc.com
Kelley Boatwright, DEP SWD: kelley.m.boatwright@dep.state.fl.us
Cindy Mulkey, DEP Siting Office: cindy.mulkey@dep.state.fl.us
Heather Ceron, EPA Region 4: ceron.heather@epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epamail.epa.gov
Catherine Collins, U.S. FWS: catherine_collins@fws.gov
Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

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)

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FACILITY DESCRIPTION

The Polk Power Station consists of: a nominal 250 MW (net) solid fuel-based integrated gasification and combined cycle (Unit 1) including a sulfuric acid plant and an auxiliary boiler; four natural gas-fueled nominal 165 MW simple cycle combustion turbine-electrical generators (CTG's) designated as Units 2, 3, 4 and 5; and ancillary equipment. Units 2 and 3 are equipped with backup fuel oil-firing capability.

PROJECT DESCRIPTION

The project involves the conversion of Units 2 through 5 from simple cycle operation to a single "4-on-1" combined cycle operation that will be known as the Polk 2 Combined Cycle. The conversion will be accomplished by adding: a duct-fired heat recovery steam generator (HRSG) and combined cycle exhaust stack to each CTG; a single nominal 500 MW steam turbine-electrical generator; a mechanical draft cooling tower; and ancillary equipment.

The project is construction of the Polk 2 Combined Cycle. The Polk 2 Combined Cycle will be a "4-on-1" combined cycle unit with an electrical generating capacity of approximately 1,160 MW. The project will utilize the Units 2 through 5 CTG's and will add four new heat recovery steam generators equipped with natural gas-fired duct burners, a single 500 MW steam turbine-electrical generator, a mechanical draft cooling tower, transmission upgrades and ancillary equipment. Ultralow sulfur fuel oil will be used as back-up fuel.

Units 2, 3, 4 and 5 will be redesignated Units 2A, 2B, 2C and 2D and as new Emissions Unit (EU) Nos. 020, 021, 022, 023 in the facility EU list.

Facility ID No. 1050233

EU No.	Emission Unit Description
001	260 MW Combined Cycle Gas Turbine No. 1
003	120 Million Btu per Hour Auxiliary Boiler
004	Sulfuric Acid Plant
005	Solid Fuel Handling System
006	Solid Fuel Gasification System
007	Emergency Generators
008	Heating Units and General Purpose Internal Combustion Engines
009	Nominal 165 MW Simple Cycle Turbine No. 2 (to be operated as Unit 2A, EU No. 020 in future)
010	Nominal 165 MW Simple Cycle Turbine No. 3 (to be operated as Unit 2B, EU No. 021 in future)
013	Nominal 165 MW Simple Cycle Turbine No. 4 (to be operated as Unit 2B, EU No. 022 in future)
014	Nominal 165 MW Simple Cycle Turbine No. 5 (to be operated as Unit 2D, EU No. 023 in future)
015	High-Temperature Syngas Cleanup System and Carbon Capture System (pre-commercial scale)
018	500 KW Emergency Generator Diesel Engine
019	Mechanical Draft Cooling Tower – consisting of six cells with six individual exhaust fans
020	Unit 2A Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
021	Unit 2B Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
022	Unit 2C Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
023	Unit 2D Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]

1. Steam produced in the Duct-fired HRSG's will drive a separate 500 MW Steam Turbine-Electric Generator.

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FACILITY REGULATORY CLASSIFICATION

- The facility is **not** a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act.
- 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 Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the PSD of Air Quality.
- The proposed project triggers 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.

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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. All documents related to applications for permits to operate an emissions unit shall be submitted to the Division of Air Resource Management of the Department of Environmental Protection (Department). Copies shall be sent to each agency identified under Compliance Authority.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Southwest District Office at: 13051 North Telecom Parkway, Temple Terrace, Florida 33637. The telephone number is 813/632-7600 and the fax number is 813/632-7665.

3. Appendices: The following Appendices are attached as a part of this permit and must be complied with: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); Appendix D (Common Testing Requirements); Appendix Subpart A (NSPS Subpart A and NESHAP Subpart A); Appendix IIII (NSPS Subpart IIII); Appendix KKKK (NSPS Subpart KKKK); Appendix XS (Semiannual NSPS Excess Emission Report); Appendix ZZZZ (NESHAP Subpart ZZZZ).

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.]

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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.]

9. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Office of Permitting and Compliance at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

10. Authorization to Construct: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.]

11. Previous Permits: The four combustion turbine-electrical generators designated as Units 2, 3, 4 and 5 (Emissions Units 009, 010, 013 and 014) were constructed pursuant to permits PSD-FL-263 and PSD-FL-363. They may be operated in the manner described in those permits, modifications to those permits and the applicable facility Title V Operation Permit for 365 days after commencement of operation of the Polk 2 Combined Cycle. After 365 days, the four combustion turbines redesignated as Emissions Units 20, 21, 22 and 23 may only be operated as allowed by this permit and by the Title V Permit described in Condition 8 above.

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A. POLK 2 COMBINED CYCLE (EU 020, 021, 022, and 023)

This section of the permit addresses the following emission units.

EU No.	Emission Unit Description
020	Unit 2A Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
021	Unit 2B Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
022	Unit 2C Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]
023	Unit 2D Nominal 165 MW Combustion Turbine and Duct-fired Heat Recovery Steam Generator [1]

1. Steam produced in the Duct-fired HRSG's will drive a separate 500 MW Steam Turbine-Electric Generator.

Fuels: Each combustion turbine (CTG) fires natural gas as the primary fuel and ultralow sulfur diesel (ULSD) fuel oil as a restricted alternate fuel. The each heat recovery steam generator (HRSG) duct burner fires only natural gas.

Design Heat Input Ratings: The design heat input rating of each CTG is 1,773 MMBtu/hour when firing natural gas and 1,919 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 higher heating value (HHV) of each fuel and 100% load. The design heat input of each duct burner located within each heat recovery steam generator (HRSG) is 264 MMBtu/hour.

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 new HRSG has a stack height of approximately 130 feet with an exit diameter of 19 feet. Existing CTG's 2A and 2B have simple cycle stacks that are 75 feet high with an exit diameter of 29 feet. Existing CTG's 2C and 2D have simple cycle stacks that are 114 feet high with an exit diameter of 18 feet.

Continuous Monitors: Each HRSG stack and each CTG 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 PERMITS, STANDARDS AND REGULATIONS

1. Previously Applicable Permits: The four CTG's previously designated as Units 2, 3, 4, and 5 (Emissions Units 009, 010, 013 and 014) were constructed pursuant to permits PSD-FL-263 and PSD-FL-363. They may be operated in the manner described in those permits, modifications to those permits and the applicable facility Title V Operation Permit for 365 days after commencement of operation of the Polk 2 Combined Cycle. After 365 days, the four CTG's redesignated as Emissions Units 20, 21, 22, and 23 may only be operated as allowed by this permit and by the subsequent Title V Operation Permit described in **Section 2**, **Condition 8**. [Permits PSD-FL-263, PSD-FL-363, and 1050233-028-AV and revisions to those permits]

2. NSPS Requirements: The four CTG's 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

3. Combustion Turbine Generators (CTG's): The permittee is authorized to modify, tune, operate, and maintain four CTG's each with a nominal generating capacity of 165 MW. Each CTG shall include an automated control system and have dual-fuel capability. Ancillary equipment for each CTG includes an inlet air filtration system, inlet air-cooling system and existing simple cycle (bypass) stack.
[Application No. 1050233-034-AC]

4. Heat Recovery Steam Generators (HRSG's): The permittee is authorized to install, operate and maintain four HRSG's, associated duct burners and separate combined cycle exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the four CTG's and deliver steam to the steam turbine-electrical generator (STEG). [Application No. 1050233-034-AC]

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5. Emission Controls

   a. *Dry Low NO_X (DLN) Combustion*: The permittee shall employ lean premix (also called DLN) technology 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 meet the CO and NO_X limits specified in this subsection in combination with the SCR system when operating in combined cycle mode. When operating in simple cycle mode, the DLN combustors and automated control system shall be tuned to meet the CO and NO_X limits specified in this subsection without use of the SCR system.

   b. *Wet Injection*: The permittee shall continue to 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 meet the CO and NO_X limits specified in this subsection when operating in combined cycle mode in combination with the SCR system. When operating in simple cycle mode, the wet injection system shall be tuned to meet the CO and NO_X limits specified in this subsection without use of the SCR system.

   c. *Selective Catalytic Reduction (SCR) Systems*: The permittee shall install, tune, operate, and maintain an SCR system within each HRSG to control NO_X emissions from each CTG in combined cycle mode when firing natural gas or ULSD. 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. 1050233-034-AC; Rule 62-212.400(PSD/BACT), F.A.C]

PERFORMANCE RESTRICTIONS

6. 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.]

7. Authorized Fuels: The CTG's 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 S/100 SCF) of natural gas. As a restricted alternate fuel, the CTG's may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight. The duct burners shall only fire natural gas, which shall contain no more than 2.0 gr S/100 SCF.
   [Application No. 1050233-034-AC; Rule 62-210.200(PTE), F.A.C.]

8. Methods of Operation: The CTG's and duct burners shall operate only under the following methods and hours of operation of operation:

   a. *Combined Cycle Operation*: Each CTG may operate continuously (8,760 hours per year) when using natural gas to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a four-on-one combined cycle unit subject to the restrictions of this permit. In accordance with the specifications of the SCR and HRSG manufacturers, the SCR system shall be on line and functioning properly during combined cycle operation or when the HRSG is producing steam.

   b. *Duct Burner Operation*: The combined group of four natural gas-fired duct burners shall operate for no more than an average of 4,000 hours per duct burner during any consecutive 12 months.

   c. *Simple Cycle Operation:* Except as described in **Specific Condition 1** of this section, after demonstrating initial compliance in combined cycle mode, the combined group of four CTG's shall operate in simple cycle mode for no more than an average of 1,000 hours per CTG during any consecutive 12 months.

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d. *Fuel Oil Usage – CTG's 2A and 2B:* CTG's 2A and 2B, combined, shall use ULSD fuel oil for no more than an average of 750 hours per CTG during any consecutive 12 months of which no more than an average of 375 hours per CTG during any consecutive 12 months may be in simple cycle mode.

e. *Fuel Oil Usage – CTG's 2C and 2D:* CTG's 2C and 2D, combined, shall use ULSD fuel oil only when operating in combined cycle mode and for no more than an average of 750 hours per CTG during any consecutive 12 months.

[Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

9. Emissions Standards: Emissions from each CTG or CTG/duct burner set, as applicable, shall not exceed the following emission standards.

Pollutant	Methods of Operation [a]	Emission Standard			BASIS [d]
		ppmvd [b]	lb/hour [c]	Compliance Method	
NO_X	Simple Cycle/Gas	15	N.A.	4-hour rolling, CEMS	KKKK
		9	68.4	24-hour block, CEMS	BACT
	Simple Cycle/Fuel Oil	42	370.7	4-hour rolling, CEMS	KKKK, BACT
	Combined Cycle/Gas	2.0 [f]	17.1	24-hour block, CEMS	BACT [c]
	Combined Cycle/Fuel Oil	8.0 [f]	70.5		
	Simple Cycle	96	N.A.	4-hour rolling, CEMS	KKKK
	Combined Cycle			30-day rolling, CEMS	
CO	Gas	4.1	17.6	Initial, Annual Stack Test	BACT
	Fuel Oil	8.0	39.0		
VOC	All	1.4	3.9	Initial Stack Test	BACT
SO_2, SAM	All	2 gr S/100 SCF of gas, 0.0015% S fuel oil [f]			BACT
$PM/PM_{10}/PM_{2.5}$	All	2 gr S/100 SCF of gas, 0.0015% S fuel oil [g]			BACT [g]
		Visible emissions shall not exceed 10% opacity for each 6-minute block average, as measured by EPA Method 9 [g]			
		Ammonia emissions shall not exceed 5 ppmvd @15% O_2 as measured by initial and annual stack tests [g]			

a. Simple = simple cycle and emissions measured in the bypass exhaust stack; Combined = combined cycle with or without use of duct burner and emissions measured in the HRSG exhaust stack.
b. ppmvd means parts per million by volume, dry and corrected to 15% oxygen.
c. The mass emission rate standards in pounds per hour (lb/hour) are based on 110% of the design heat input achievable at 20°F and represent the maximum allowable emission rate. No corrections of the stated lb/hour emission rate standards to account for site-specific conditions (temperature, pressure, humidity) are allowed.
d. Basis for the emission standard is either NSPS Subpart KKKK or Department's BACT determination.
e. The BACT emission standards for NO_X while operating in combined cycle are more stringent than the corresponding Subpart KKKK emissions standards of 15 and 42 ppmvd @15% O_2 on a 30-day rolling average for natural gas and fuel oil, respectively.
f. The applicant requested the stated sulfur fuel limits. These BACT values are more stringent and insure compliance with the corresponding Subpart KKKK SO_2 emission standard.
g. The listed work practices and limits on surrogates and precursors limit potential $PM/PM_{10}/PM_{2.5}$ (filterable and condensable).

[Application No. 1050233-034-AC; Rule 62-212.400(BACT), 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 Specific Condition No. 9 of this subsection. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

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10. Operating Procedures: BACT determinations established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and ensure maintenance of the CTG's, duct burners, HRSG's, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods described below for minimizing excess emissions.
[Rules 62-4.070(3), 62-210.700 and 62-212.400(BACT), F.A.C.]

11. 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(Definitions), F.A.C.]

12. 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. 1050233-034-AC; Rule 62-4.070(3), F.A.C.]

13. 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.]

14. Excess Emissions Allowed - Best Operational Practices: Excess emissions resulting from startup, shutdown or malfunction of the Polk 2 Combined Cycle are allowed providing the permittee employs Best Operational Practices to minimize emissions. The permittee shall include Best Operational Practices for Startup, Shutdown and Malfunction within the "4 on 1" Polk 2 Combined Cycle operating manual. The measures can include but are not limited to use of stack dampers to minimize heat loss during short-term shutdowns, additional piping, valves, practices, training or software to minimize the excess emissions.
[Rules 62-4.070, 62-210.700(1) and 62-212.400(PSD/BACT), F.A.C.

15. Excess Emissions Allowed - Duration: Excess emissions resulting from startup, shutdown or malfunction of the Polk 2 Combined Cycle are allowed providing the duration of excess emissions is minimized. Pursuant to Rules 62-210.700(1) and 62-210.700(5), F.A.C., the Department specifically authorizes the following durations of excess NO_X emissions of NO_X applicable to the CTG/HRSG systems. 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):
    - *Steam Turbine-Electric Generator (STEG) Cold Startup*: For cold startup of the STEG, excluded emissions from any CTG/HRSG system shall not exceed eight (8) hours in any 24-hour period. A cold startup of the STEG is defined as startup of the 4-on-1 combined cycle system following a shutdown of the STEG lasting at least 48 hours.

      {During a cold startup of the STEG, 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. Shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}

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- *CTG/HRSG 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 pounds per square inch, gauge (psig) for at least a one-hour period.
- *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 when the pressure in the HP steam drum is equal to or greater than 450 psig.
- *CTG/HRSG System Shutdown*: For shutdown of the CTG/HRSG operation, excluded emissions from any CTG/HRSG system shall not exceed two hours in any 24-hour period.
- *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.
- *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.

16. Combustor Tuning: CEMS data collected during initial or other major combustor tuning sessions and during 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.]

17. Ammonia Injection: Ammonia injection shall begin as soon as operation of the CTG/HRSG system achieves the operating parameters specified by the manufacturer. As authorized by Rule 62-210.700(5), F.A.C., the above condition allows excess emissions only for specifically defined periods of startup, shutdown, fuel switching, and documented malfunction of the CTG/HRSG system including the pollution control equipment. [Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.]

TESTING REQUIREMENTS

18. Operating Rate During Testing: Initial and annual stack tests shall be conducted at 90% or greater of the CTG design heat input ratings provided in emissions unit description above and corrected as described in **Specific Condition 6** of this subsection. If it is impracticable to test at 90% or greater of the design heat rate for the applicable conditions, the combustion turbine may be tested at less than 90%. In such case, the measured mass emission rates shall be 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]

19. Initial Compliance Demonstrations: 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 while firing fuel oil shall be conducted or commence (based on averaging period) within 60 days of any fuel oil firing in a CTG. In accordance with the test methods specified in this permit, the CTG shall be tested to demonstrate initial compliance with the mass emission rate standard for VOC, the concentration based standard for ammonia slip and the visible emissions standard. Initial testing for VOC shall be done on the combined cycle stack. Compliance with the VOC standard during combined cycle operation shall be deemed to show compliance during simple cycle operation. [Rules 62-4.070, 62-297.310(7)(a), F.A.C.; 40 CFR 60.8]

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20. Annual Compliance Testing: Annual compliance tests for CO, ammonia slip and visible emissions shall be conducted during each federal fiscal year (October 1st to September 30th) while firing natural gas in combined cycle mode. CO, ammonia slip and visible emissions tests shall be performed while firing fuel oil on each combustion turbine that is fired with fuel oil for more than 400 hours in combined cycle mode 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. Compliance with the CO emission standards shall thereafter be deemed to demonstrate compliance with the VOC emission standards. 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.]

21. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour NO_X BACT emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any Relative Accuracy Test Audit (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]

22. Compliance for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$: In stack compliance testing is not required for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$. Compliance with the limits and control requirements for SAM, SO_2 and $PM/PM_{10}/PM_{2.5}$ is based on the recordkeeping required in **Specific Condition 30**. Additional compliance assurance is provided by visible emissions and CO testing and NO_X continuous monitoring.
    [Rule 62-212.400 (BACT), F.A.C.]

23. 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.]

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

Method	Description of Method [a]
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
CTM-027 or 320	Procedure for Collection and Analysis of Ammonia in Stationary Source {Notes: This is an EPA conditional test method. The minimum detection limit shall be 1 ppm.} Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy

a. 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]

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MONITORING REQUIREMENTS

25. Continuous Emissions Monitoring Systems (CEMS): The permittee shall install, calibrate, maintain, and operate CEMS to measure and record the emissions of NO_X from each HRSG stack and each CTG stack in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this subsection. During simple cycle operation, a CEMS on the simple cycle stacks shall be used to show compliance with the NO_X standard given in the subsection. 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 40 CFR 75. The RATA tests required for the NO_X monitor shall be performed using EPA Method 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.

26. 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.

    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. *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

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periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance reports. For example, the "24-hr block average" may consist of only 6 valid operating hours for the day.}

d. *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 proceeding that unit operating hour.

e. *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 **Specific Condition Nos. 14 and 15** 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.

f. *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.]

27. Ammonia Monitoring Requirements: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain an ammonia flow meter to measure and record the ammonia injection rate to the SCR system prior to the initial compliance tests. The permittee shall document and periodically update the general range of ammonia flow rates required to meet permitted emissions levels over the range of load conditions allowed by this permit by comparing NO_X emissions recorded by the CEM system with ammonia flow rates recorded using the ammonia flow meter. During NO_X monitor downtimes or malfunctions, the permittee shall operate at the ammonia flow rate and, as applicable for fuel oil firing, the water-to-fuel ratio, that is consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

RECORDS AND REPORTS

28. Monitoring of Capacity: The permittee shall monitor and record the operating rate of each CTG and HRSG duct burner 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) and 62-212.400(BACT), F.A.C.]

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29. 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.]

30. 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 the Compliance Authority upon 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.]

31. 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.]

32. 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

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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]

33. 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.]

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D. EMERGENCY GENERATOR (EU 018)

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

EU No.	Brief Description
018	500 kW emergency generator (model year 2011 and later)

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS, Subpart IIII Applicability: The emergency generator is a Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and is 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 generator is a Stationary Reciprocating Internal Combustion Engine located at a minor source of hazardous air pollutants emissions and are subject to 40 CFR 63 Subpart ZZZZ. Because the emergency generator is subject to regulation under 40 CFR 60 Subpart IIII, Subpart ZZZZ only requires that the emergency generator meet the requirements of 40 CFR 60 Subpart IIII. No further requirements of Subpart ZZZZ apply to the emergency generator.
   [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 one fuel oil-fired emergency generator. [Application No. 1050233-034-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 100 hours/year. The generator shall burn distillate fuel oil with a sulfur content of 15 parts per million (ppm) or less.
   [Application No. 1050233-034-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. 1050233-034-AC; NSPS Subpart IIII]

6. Operation and Maintenance. The owner or operator must operate and maintain the stationary compression ignition RICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply. [40 CFR 60.4211(a)]

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MONITORING OF OPERATIONS

7. Hour Meter. The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 60.4209(a)]

COMPLIANCE

8. Compliance Requirements. Manufacturer certification can be provided to the Department in lieu of actual stack testing in accordance to 40 CFR Part 89 or Part 94, as applicable, for the same model year and maximum engine power.

TESTING REQUIREMENTS

9. Performance Test. Performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F.

10. NTE Standards. Exhaust emissions from stationary compression ignition RICE that are complying with the emission standards specified in **Specific Conditions 5** of this subsection must not exceed the (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard, determined from the following equation: NTE = (1.25) x (Standard). [40 CFR 60.4212]

RECORDS AND REPORTS

11. Notification, Recordkeeping and Reporting Requirements: The permittee shall adhere to the compliance testing and certification requirements listed in 40 CFR 60.4211 and maintain records demonstrating fuel usage and quality. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.4211]

12. Required Records. Owner or operator must keep records of the operation of the engine in emergency and non-emergency and for maintenance that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214]

13. Record Retention: The owner or operator must keep records in a suitable and readily available form for expeditious reviews. 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)]

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E. COOLING TOWER (EU 019)

This subsection of the permit addresses the following emissions unit.

ID No.	Emissions Unit Description
019	Mechanical Draft Cooling Tower – consisting of six cells with six individual exhaust fans

The mechanical cooling tower will use onsite reclaimed water from the facility water treatment plant as the primary source of cooling water and the existing onsite wells as the backup source of cooling water or a combination of reclaimed water and well water.

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install one 6-cell wet evaporative mechanical draft cooling tower with the following nominal design characteristics: an air exhaust flow rate of 1,200,000 actual cubic feet per minute (acfm); a circulating water flow rate of 62,500 gallons per minute; drift eliminators; and a drift rate of no more than 0.0005 percent of the circulating water flow. [Application No. 1050233-034-AC; Design]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing commercial operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.0005 percent of the circulating water flow rate. [Rule 62-212.400(BACT), F.A.C.]

   {Permitting Note: This work practice standard is established as BACT for $PM/PM_{10}/PM_{2.5}$ emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 0.4 tons of PM and PM_{10} per year and less than 0.03 tons of $PM_{2.5}$ per year.}

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