FLORIDA DEPARTMENT OF
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PERMITTEE

Shady Hills Energy Center, LLC
901 Main Avenue
Norwalk, Connecticut 06851

Authorized Representative:
Roy S. Belden, Vice President

Air Permit No. 1010524-001-AC (PSD-FL-444)
Expires: December 31, 2022
Facility ID No. 1010524
Shady Hills Combined Cycle Facility

PROJECT

This is the final air construction permit, which authorizes the construction and operation of the Shady Hills Combined Cycle Facility (SHCCF), a new 573-megawatt (MW) (winter) 1-on-1 combined cycle electrical generating facility to be owned and operated by Shady Hills Energy Center, LLC. The proposed work will be conducted on an approximately 14-acre parcel east of and located adjacent to the existing Shady Hills Generating Station (SHGS) power island, which is owned and operated by Shady Hills Power Company, L.L.C. The SHGS is an electric generating power plant categorized under Standard Industrial Classification No. 4911. The existing facility is in Pasco County at 14240 Merchant Energy Way in Shady Hills, Florida. The UTM coordinates are Zone 17, 347.0 kilometers (km) East and 3,139.0 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); and 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, only minor changes and 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 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

David Lyle Read, P.E.
2018.07.27 14:34:57 -04'00'

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Construction Permit package 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.

Mr. Roy S. Belden, Vice President, Shady Hills: roy.belden@ge.com
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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.

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SHGS FACILITY DESCRIPTION

The SHGS is an existing electric generating power plant owned and operated by Shady Hills Power Company, L.L.C., which consists of three primary electrical generating units. Units 1 through 3 (EU 001 – EU 003) consist of three nominal 170 MW General Electric (GE) Frame 7FA combustion turbine-electrical generators (Model PG 7241FA). The simple cycle combustion turbines (SCCT) operate in simple-cycle peaking and intermittent-duty modes and are authorized to fire natural gas and distillate oil. To reduce emissions of nitrogen oxides (NO_X), each SCCT is equipped with dry low-NO_X (DLN) combustors when firing natural gas and a water injection system when firing oil. Compliance with the NO_X emission standard is demonstrated with a continuous emissions monitoring system (CEMS).

SHGS also includes a 10 million British thermal unit per hour (MMBtu/hour) natural gas fired process heater, and two compression ignition (CI) internal combustion engines (ICE). The CI ICE consist of a diesel fired emergency generator (1,341 horse power (HP)) and an emergency fire pump engine (222 HP).

SHGS consists of the following emissions units (EU).

EU No.	SHGS (Facility ID No. 1010373) Emission Unit Description
001	SCCT Unit 1
002	SCCT Unit 2
003	SCCT Unit 3
010	Natural Gas Fuel Heater (10 MMBtu/hour)
011	Emergency Diesel Generator (1,341 HP)
012	Emergency Diesel Fire Pump (222 HP)

PROPOSED SHCCF PROJECT

This permit authorizes the construction of new emissions units comprising the SHCCF to be constructed, owned, and operated by Shady Hills Energy Center, LLC. This permit does not address and will not modify any of the existing SHGS units owned and operated by Shady Hills Power Company, L.L.C. The SHCCF will consist of the following:

EU No.	SHCCF (Facility ID No. 1010524) Emission Unit Description
001	GE 7HA.02 Combustion Turbine and HRSG with Duct Firing
002	Auxiliary Boiler
003	Emergency Diesel Generator (1,500 kW)
004	Emergency Fire Pump Engine (347 HP)
005	Mechanical Draft Cooling Tower
006	Two Circuit Breakers

FACILITY (SHGS AND SHCCF) 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 (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- The facility operates units subject to New Source Performance Standards (NSPS) of Title 40, Part 60, of the Code of Federal Regulations (40 CFR 60).
- The facility operates units subject to National Emissions Standards of Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

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 mailing address for the Office of Permitting and Compliance 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 Southwest District Office. The mailing address and phone number of the Southwest District Office is: 13051 N. Telecom Parkway, Temple Terrace, Florida 33637-0926, 813-632-7600.

3. Appendices: The following Appendices are attached as a part of this permit:
   a. Appendix A. Citation Formats and Glossary of Common Terms
   b. Appendix B. General Conditions
   c. Appendix C. Common Conditions
   d. Appendix D. Common Testing Requirements
   e. Appendix E. Summary of BACT Determinations
   f. Appendix F. NSPS, Subpart A, General Provisions
   g. Appendix G. NSPS, Subpart Dc, Requirements for Small Industrial-Commercial-Institutional Steam Generating Units
   h. Appendix H. NSPS, Subpart IIII, Requirements for Stationary Compression Ignition Internal Combustion Engines
   i. Appendix I. NSPS, Subpart KKKK, Requirements for Gas Turbines and Duct Burners
   j. Appendix J. NSPS, Subpart TTTT, Requirements for Greenhouse Gas Emissions from Electric Generating Units
   k. Appendix K. NESHAP, Subpart A, General Provisions
   l. Appendix L. NESHAP, Subpart ZZZZ, Requirements for Reciprocating Internal Combustion Engines.

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: No emissions unit shall be constructed or 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. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   a. 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.

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 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.

c. 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.]

9. Title V Permit: This permit authorizes new construction of the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and 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 each Compliance Authority. [Rules 62-4.030, 62-4.050 and Chapter 62-213, F.A.C.]

10. Annual Operating Report (AOR): The owner or operator shall submit an AOR for the Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) to the Department annually pursuant to subsection 62-210.370(3), F.A.C.

11. Methane Measurement:

a. The permittee shall monitor and record the following: (1) gas flow at the inlet to the SHCCF gas yard, (2) gas consumed by the SHCCF combustion turbine (EU No. 001), (3) gas consumed by the duct burner, and (4) gas consumed by the SHCCF auxiliary boiler (EU No. 002). At the end of each calendar month, the permittee shall calculate the amount of methane difference for the month. The amount of methane difference shall be calculated as the difference between the gas flow into the SHCCF (Item 1) and the gas consumed by the emissions units of the SHCCF (Items 2, 3, and 4). Estimates of any natural gas required to be evacuated for safety reasons, based on engineering calculations, may be deducted from the monthly methane difference. The following methodology will be used:

Monthly methane difference (scf/month) =

Monthly average methane content of the natural gas (NG) (%) x

[Total monthly NG flow at gas yard inlet (scf/month) ***minus***

Total monthly NG flow into EU 001 (scf/month) ***minus***

Total monthly NG flow into EU002 (scf/month) ***minus***

Total monthly NG flow into duct burner (scf/month) ***minus***

Total monthly NG evacuation for safety reasons (scf/month)]

{Permitting Note: The methane percentage may be determined based on an annual test of the pipeline natural gas in accordance with the Acid Rain Appendix D requirements.}

b. Each calendar month, the permittee shall record the following for the previous month: monthly average methane content of the natural gas (%), the total gas flow into the SHCCF, gas consumed by the SHCCF

combustion turbine (EU No. 001), gas consumed by the SHCCF auxiliary boiler (EU No. 002), gas consumed by the SHCCF duct burner, estimated gas evacuated for safety reasons based on engineering calculations, the calculated monthly methane difference, and the monthly methane difference as a percentage of gas flow into the SHCCF.

c. Calculations and supporting natural gas flow rates data shall be recorded in written or electronic form. The permittee shall make these records available upon request within three business days.

d. As part of the facility's Annual Operating Report, the permittee shall report the total amount of calculated monthly methane difference for the calendar year, and the calculated monthly methane difference as s percentage of gas flow into the SHCCF for each month in the calendar year.

*{Permitting Note: **Section 2, Specific Condition 11** is a BACT work practice standard and is not a numerical emission limit. This condition only requires recording natural gas flow rates using standard practices and/or standard plant equipment and calculating a methane difference from the SHCCF. The natural gas flow meter used for the incoming gas at the SHCCF metering station is expected to be a calibrated ultrasonic meter that will likely have a manufacturer's accuracy rating of approximately plus or minus 0.1%. The gas flow meters used for the CTG, duct burner, and auxiliary boiler may have slightly greater tolerances in accuracy (approximately plus or minus 0.35 percent). Changes in monthly and annual methane calculations and percentages of gas flow rates may be attributable to the accuracy of the gas flow measurement devices or the estimated quantities of gas evacuated for safety purposes, which is not directly measured.}*

[Rules 62-4.130 and 62-212.400(BACT), F.A.C.]

A. GE 7HA.02 CTG (EU No. 001)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
001	GE 7HA.02 Combustion Turbine and HRSG with Duct Firing

Emissions Unit 001 consists of one nominal 385 MW GE 7HA.02 combustion turbine generator (CTG), one heat recovery steam generator (HRSG) with duct firing [approximately 210 million British thermal units per hour (MMBtu/hr)], and one nominal 210 MW steam turbine generator (STG). Evaporative cooling is employed at ambient temperatures of 59°or higher.

The HRSG will have a stack height of approximately 149 feet and an inner stack diameter of approximately 23.0 feet. The stack will be equipped with a continuous emissions monitoring systems (CEMS) to measure and record NO_X emissions as well as flue gas oxygen or carbon dioxide content. The efficient combustion of natural gas will minimize emissions of carbon monoxide (CO), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfuric acid mist (SAM), and sulfur dioxide (SO_2). DLN combustion technology and a selective catalytic reduction (SCR) system will be used to control emissions of NO_X.

{Permitting Note: In accordance with Rule 62-212.400(PSD), F.A.C., the emission unit above is subject to Best Available Control Technology (BACT) determinations for the following pollutants: greenhouse gas (GHG), CO, NO_X, $PM/PM_{10}/PM_{2.5}$, SAM, and SO_2. The final BACT determinations are presented in Appendix E of this permit. This emissions unit is regulated under the federal Acid Rain Program; and, NSPS Subpart A (General Provisions) and Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) of 40 CFR 60, adopted and incorporated by reference in Rule 62-204.800(8)(b)82., F.A.C.}

EQUIPMENT

1. CTG & HRSG: The permittee is authorized to install, tune, operate, and maintain one GE 7HA.02 CTG with a nominal generating capacity of 385 MW with inlet air cooling (i.e. evaporative cooling) and one steam turbine generator with a nominal generating capacity of 210 MW. The CTG will be designed for operation in combined-cycle mode with one HRSG and one steam turbine generator. The HRSG will have duct firing with heat input of approximately 210 MMBtu/hr. The CTG may also operate in simple cycle mode without the steam turbine generator. The HRSG exhaust stack shall be approximately 149 feet tall and 23.0 feet in diameter. [Rule 62-4.070(3), F.A.C. and Application No. 1010524-001-AC]

CONTROL TECHNOLOGY

2. Combustion Technology: The permittee shall install, operate and maintain the DLN combustion system or its equivalent on the CTG to control NO_X emissions. Prior to the initial emissions performance tests required for the CTG, the DLN combustors or its equivalent and automated gas turbine 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. Thereafter, the system shall be maintained and tuned in accordance with the manufacturer's recommendations or determined best practices.
   [Design; Rule 62-212.400(10)(BACT), F.A.C.]

3. Selective Catalytic Reduction: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions. The SCR system consists of an ammonia (NH_3) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_X emissions. The storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68. *{Permitting Note: If the aqueous solution is approximately 19 percent ammonia (less than 20 percent), then the requirements of 40 CFR 68 would not apply.}* [Rule 62-212.400(10)(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

4. Permitted Capacity: The maximum heat input rate of the gas turbine is 3,622.1 MMBtu/hour based on a compressor inlet air temperature of 59° F, the higher heating value (HHV) of natural gas, and 100% load. Heat input rates will vary depending upon gas turbine characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. The manufacturer's performance curves shall be used for determination of different loads for initial and annual compliance testing as established in **Specific Conditions 11** and **12**. 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(PTE), F.A.C.]

5. Authorized Fuels: The combustion turbine shall only fire natural gas, which shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (gr. sulfur/100 SCF). [Rules 62-210.200 (PTE) and 62-212.400(BACT), F.A.C.]

6. Hours of Operation: The hours of operation are not restricted (8,760 hours per year), however, the duct firing shall be limited to 4,000 hours per year. [Rule 62-210.200(PTE), F.A.C.]

7. Prohibition on Low-Load Operation: Other than during periods of startup, shutdown, SCR and DLN (combustion) tuning, non-base-load CO stack tests (for compliance with **Specific Condition 11.b** or **12.b**), or documented malfunctions (as defined in **Specific Condition 17.h**), the permittee shall not operate the CTG at a load less than the load at which compliance with the non-base-load CO limit was demonstrated in the most recent non-base-load CO test (**Specific Condition 11.b** or **12.b**), as determined by the performance curves in **Specific Condition 4**. The minimum operating CTG load shall be no less than 25% at 59°F. [Rule 62-212.400(BACT), F.A.C.]

{Permitting Note: Limiting low-load operation prevents increased CO emissions associated with low turbine loads. According to manufacturer estimates, the minimum operating loads established under this condition will likely be in the vicinity of 25% CTG load at 59°F.}

EMISSIONS AND TESTING REQUIREMENTS

8. Emission Standards: Emissions from the CTG/HRSG shall not exceed the following standards:

Pollutant	Emission Standard [a]	Basis	Compliance Method [b]	Averaging Time
NO_X	2.0 ppmvd @15% O_2	Primary BACT (Normal operating conditions)	CEMS	24-hr block avg.
	15 ppmvd @15% O_2 (for turbine loads $\geq$ 75%)	NSPS KKKK, Secondary BACT [c]		30-operating-day rolling avg. [d]
	96 ppmvd @15% O_2 (for turbine loads < 75%)			
CO	4.3 ppmvd @15% O_2 (for turbine loads $\geq$ 90%)	BACT	Initial and annual stack tests	Three 1-hr runs
	7.1 ppmvd @15% O_2 (for turbine loads < 90%)			
	6.5 ppmvd @15% O_2 (when duct firing)			

Pollutant	Emission Standard [a]	Basis	Compliance Method [b]	Averaging Time
$PM/PM_{10}/PM_{2.5}$ [e]	2.0 gr. sulfur/100 SCF natural gas	BACT	Fuel Record Keeping	N/A
	10 percent opacity (Visible Emissions)		Annual Stack Test [f]	6-minute block
SO_2 and SAM	2.0 gr. sulfur/100 SCF natural gas	BACT	Fuel Record Keeping	N/A
GHGs	875 lb/MWh	Primary BACT	CEMS or fuel-use monitoring [g] (40 CFR 75)	12-operating-month rolling avg. [h]
	1,000 lb/MWh	NSPS TTTT, Secondary BACT		

a. NO_X and CO concentration emission standards are expressed in parts per million by volume, dry, corrected to 15 percent oxygen, abbreviated as ppmvd @15% O_2.
b. CEMS means continuous emissions monitoring system.
c. Secondary BACT emission limits are alternative emission limits for specified modes of operation, pursuant to **Specific Conditions 17 and 18**. Demonstrating compliance with the NO_X limit in Table 1 of NSPS Subpart KKKK limit shall be sufficient for demonstrating compliance with the Secondary NO_X BACT limit.
d. The composite NSPS KKKK NO_X emission limit for periods during which multiple NO_X emission standards apply shall be determined in accordance with 40 CFR 60.4380(b)(3).
e. The fuel sulfur specifications combined with the efficient combustion design and operation of the combustion turbines represent BACT for $PM/PM_{10}/PM_{2.5}$ and SO_2 emissions. Compliance with the fuel specifications, CO standards, and visible emissions (opacity) limit shall serve as indicators of good combustion.
f. Compliance with the 10% opacity standard shall be demonstrated by conducting 30-minute tests in accordance with EPA Method 9 - Visual Determination of Opacity, at baseload conditions. Visible emissions during startups, shutdowns, SCR tuning, DLN tuning, and malfunctions shall not exceed 10% opacity, except for up to six 6-minute average periods during a calendar day, which shall not exceed 20% opacity.
g. GHG monitoring shall be in accordance with 40 CFR 75, which includes options for continuous monitoring of fuel use combined with the use of emissions factors for GHGs, or the use of a continuous emissions monitor for CO_2. Calculations of CO_2e emissions shall use the 100-year global warming potential values listed in Table A-1 to Subpart A of 40 CFR 98 (2017) (i.e. 1 for CO_2, 25 for CH_4 and 298 for N_2O). The GHG BACT limit applies to the 1-on-1 combined cycle unit as an aggregate limit. The Primary GHG BACT limit applies during all operation, except the conditions enumerated in **Specific Condition 17**. However, the Secondary GHG BACT limit applies for all operation, including the conditions enumerated in **Specific Condition 17**. Compliance with the Secondary GHG BACT limit is demonstrated through compliance with NSPS Subpart TTTT.
h. The NSPS Subpart TTTT GHG standard applies during all periods of operation.

[Rules 62-4.070(3), 62-210.200, 62-212.400, 62-297, F.A.C.; 40 CFR 60, Subpart KKKK; and 40 CFR 60 Subpart TTTT]

9. Unconfined Particulate Emissions: During the construction period, unconfined PM emissions shall be minimized by dust suppressing techniques such as covering, confining, or applying water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Testing Requirements: Initial and annual tests shall be conducted at 90% or greater of the design heat input ratings provided in the 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. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted. 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. This testing is separate from and in addition to non-base-load testing for CO described below. [Rules 62-297.310(3) & (9), F.A.C.]

11. Initial Compliance Demonstrations:

    a. *CO and Visible Emissions, Base-Load:* Initial compliance stack tests shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup on that fuel. In accordance with the test methods specified in this permit, the CTG shall be tested to demonstrate initial compliance with the emission rate standards for CO (with and without duct firing) and with the visible emissions standard (with duct firing).

    b. *Carbon Monoxide, Non-Base-Load:* Initial stack tests for non-base-load CO shall be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after the initial startup. The tests for non-base-load CO shall be conducted at a CTG load below 90%. The minimum load at which compliance with the applicable CO limit in **Specific Condition 8** is demonstrated in this test shall determine the minimum operating load for that CTG, pursuant to **Specific Condition 7**. If measured CO emissions in the non-base-load stack test are greater than the CO limit, this shall not constitute a failed stack test; rather, the permittee shall conduct non-base-load testing until the load at which compliance is demonstrated can be determined. *{Permitting Note: The non-base-load CO test will not be used to define the facility's "testing capacity" for the purposes of Rule 62-297.310(3), F.A.C., or **Specific Condition 10**.}*

    c. *GHGs:* Within 60 days after achieving the maximum production rate for the entire combined-cycle unit, the unit shall demonstrate achievement of a target rate of 820 lb CO_2 per MWh firing natural gas at base-load, corrected to ambient conditions of 85 °F and 55% relative humidity. This initial performance demonstration shall consist of a continuous operating period of no less than two hours. The permittee may use CO_2 monitoring system data for this demonstration. *{Permitting Note: After performance of this initial demonstration, this condition and target rate shall no longer apply and will not be included in the Title V operating permit for this facility.}*

    [Rules 62-4.070, 62-212.400(BACT) and 62-297.310(8)(b), F.A.C. and 40 CFR 60.8]

12. Annual Compliance Testing:

    a. *Visible Emissions and Base-Load CO:* Annual compliance tests for base-load CO (at ≥ 90% CTG load, with and without duct firing) and visible emissions (at ≥ 90% CTG load with duct firing) shall be conducted. Annual testing while duct firing is not required if duct firing was not used for more than 400 hours during the prior calendar year.

    b. *Non-Base-Load CO:* Tests for non-base-load (i.e. below 90% CTG load, without duct firing) CO operation shall be conducted annually. The minimum load at which compliance with the applicable CO limit in **Specific Condition 8** is demonstrated in the non-base-load CO test shall determine the minimum operating load for the CTG, pursuant to **Specific Condition 7**. If measured CO emissions in the non-base-load stack test are greater than the CO limit, this shall not constitute a failed stack test; rather, the permittee shall conduct non-base-load testing until the load at which compliance is demonstrated can be determined. *{Permitting Note: The non-base-load CO test will not be used to define the facility's "testing capacity" for the purposes of Rule 62-297.310(3), F.A.C., or **Specific Condition 10**.}*

    {Permitting Note: Consistent with Rule 62-297.310(8)(b)2, F.A.C., for the purposes of an air operation permit renewal, the owner or operator may utilize the most recent emissions test, provided such test occurred within the term of the current operation permit.}

    [Rules 62-4.070, 62-212.400(BACT), and 62-297.310(8)(a)4, F.A.C.]

13. Continuous Compliance: Continuous compliance with the permit standard for emissions of NO_X shall be demonstrated with data collected from the required CEMS. [Rules 62-4.070, and 62-212.400(BACT), F.A.C.]

14. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources
20	Determination of NO_X, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-204.800, F.A.C.; and Appendix A of 40 CFR 60]

PRIMARY AND SECONDARY BACT APPLICABILITY

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

15. 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 may 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.

    d. *Normal operating conditions* is defined as at all times, except during the operating conditions defined in **Specific Condition 17**.

    e. *Within one working day* is defined as at least the next workday by close of business after discovery.

    [Rule 62-210.200(173, 255, and 269), F.A.C.]

16. 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(1), F.A.C.]

17. Demonstration of Compliance with Primary NO_X and GHG BACT: The Primary NO_X and GHG BACT limits apply at all times, except during the following operating conditions:

    a. *Steam Turbine Cold Startup:* During a cold startup of the steam turbine, the Primary NO_X and GHG BACT emission limits do not apply to the CTG/HRSG system, for no more than 6 hours during any 24-hour period. A cold startup of the steam turbine is defined as startup of the 1-on-1 combined cycle system following a shutdown of the steam turbine lasting at least 72 hours.

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

b. *CT/HRSG System Cold Startup:* During a cold startup of the CTG/HRSG system, the Primary NO_X and GHG BACT emission limits do not apply, for no more than 4 hours during any 24-hour period. A cold startup of the CTG/HRSG system is defined as a startup of the 1-on-1 combined cycle system following a shutdown of the CTG/HRSG System lasting at least 72 hours.

c. *CT/HRSG System Warm Startup:* During a warm startup of the CTG/HRSG system, the Primary NO_X and GHG BACT emission limits do not apply, for no more than 3 hours during any 24-hour period. A warm startup of the CTG/HRSG system is defined as startup of the 1-on-1 combined cycle unit following shutdown for a period exceeding 8 hours but less than 72 hours.

d. *CT/HRSG System Hot Startup*: During a hot startup of the CTG/HRSG system, the Primary NO_X and GHG BACT emission limits do not apply, for no more than 2 hours during any 24-hour period. A hot startup of the CTG/HRSG system is defined as startup of the 1-on-1 combined cycle unit following shutdown for a period less than or equal to 8 hours.

e. *Shutdown of Combined-Cycle Operation:* During the shutdown of combined cycle operation, the Primary NO_X and GHG BACT emission limits do not apply to any CTG/HRSG system, for no more than 3 hours during any 24-hour period.

f. *CT/HRSG System Shutdown:* During the shutdown of the CTG/HRSG system, the Primary NO_X and GHG BACT emissions limits do not apply to that CTG/HRSG system, for no more than 2 hours during any 24-hour period.

g. *SCR and DLN Tuning:* The Primary NO_X and GHG BACT emission limits do not apply during either an SCR or a DLN tuning session and manufacturer required Full-Speed No-Load Tests (FSNL) trip tests, provided the tuning session is performed in accordance with the manufacturer's specifications or determined best practices. Prior to performing any tuning session, the permittee shall provide the Compliance Authority with an advance notice that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

h. *Documented Malfunction:* The Primary NO_X and GHG BACT emission limits do not apply during a documented malfunction, for no more than 2 hours in any 24-hour period. To qualify as a "documented malfunction," the malfunction must be documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail. The permittee shall report to the Department the nature, extent, and duration of the malfunction, and the actions taken to correct the problem.

i. *Separate Events:* Emissions during the startup, shutdown, SCR tuning, DLN tuning and documented malfunction events listed above are not subject to the Primary BACT standards for NO_X or GHGs. These are considered separate events, and each event may occur independently within any 24-hour period ("any 24-hour period" means a calendar day, midnight to midnight). Data from the NO_X and CO_2 CEMS (or fuel use monitor) collected during the events described above will not be used to demonstrate compliance with the Primary BACT emission limits for NO_X and GHGs.

j. *CEMS Data:* Data from the NO_X and CO_2 CEMS (or fuel use monitor if a CO_2 CEMS is not used) collected during the operating conditions described above, during which the Primary NO_X and GHG BACT limits do not apply, will be used to demonstrate compliance with the Secondary NO_X and GHG BACT emission limits at all times, as described in **Specific Conditions 8 and 18**. All valid emissions data (including data collected during startups, shutdowns, malfunction, SCR tuning and DLN tuning) shall be used to report emissions for the Annual Operating Report.

[Rules 62-212.400(BACT), 62-210.370, and 62-210.700, F.A.C.]

18. Secondary NO_X and GHG BACT Emission Limits: During the operating conditions listed in **Specific Condition 17**, the permittee shall comply with the Secondary NO_X and GHG BACT limits specified in **Specific Condition 8**. Demonstrating compliance with the NO_X limit in NSPS Subpart KKKK at all times shall be sufficient for demonstrating compliance with the Secondary NO_X BACT limit. Demonstrating

compliance with the GHG limit in NSPS Subpart TTTT at all times shall be sufficient for demonstrating compliance with the Secondary GHG BACT limit. [Rule 62-212.400(BACT), F.A.C., and 40 CFR 60, Subparts KKKK and TTTT]

{Permitting Note: Compliance with the Secondary NO_X and GHG BACT Emission Limits ensures continuous compliance with an applicable SIP emission limit.}

19. GHG BACT Applicability: Other than during the operating conditions listed in **Specific Condition 17**, all emissions and generation from the CTG and duct burner are included when demonstrating compliance with the Primary GHG BACT limit, regardless of whether the CTG is operated in combined-cycle or simple-cycle mode. [Rule 62-212.400(BACT), F.A.C.]

20. BACT Work Practice Standards for Startup and Shutdown:

    a. *Manufacturer-Recommended Startup and Shutdown Procedures*: The permittee shall follow the manufacturer's recommended operating procedures for startup and shutdown. All personnel responsible for startup or shutdown of equipment shall be familiar with these procedures. For each operator responsible for startup or shutdown of these turbines, the permittee shall document that the operator has been trained in the manufacturer's recommended procedures for startup and shutdown. The permittee shall make this documentation available to the Department upon request.

    b. *Startup & Shutdown Opacity:* During startup and shutdown, the opacity of the exhaust gases shall not exceed 10%, except for up to six 6-minute averaging periods in a calendar day during which the opacity shall not exceed 20%.

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

    {Permitting Note: These BACT work practice standards provide an emissions limitation on all pollutants during periods of startup and shutdown.}

21. Notification Requirements: The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate non-compliance for a given averaging period. [Rule 62-4.070, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

22. CEMS: Subject to the following requirements, the permittee shall install, calibrate, operate, and maintain a CEMS to measure and record the emissions of NO_X from the combustion turbines in terms of the applicable standards. The monitoring system shall be installed, and functioning within the required performance specifications by the time of the initial compliance demonstration.

    a. *NO_X Monitor:* Each NO_X monitor shall be certified pursuant to the specifications of 40 CFR Part 75. Quality assurance procedures shall conform to the requirements of 40 CFR Part 75. The annual and required 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 Monitor:* The oxygen (O_2) or carbon dioxide (CO_2) content of the flue gas shall be monitored at the location where NO_X is monitored to correct the measured emissions rates to 15% O_2. 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 Part 75.

    [Rules 62-4.070(3), 62-212.400(BACT), F.A.C., and 40 CFR Part 75]

23. Moisture Correction: If necessary, the owner or operator shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C]

24. CEMS Data Requirements for NO_X BACT Standards:

*{Permitting Note: The following conditions apply only to the SIP-based NO_X emissions standards in **Specific Condition 8** of this section. These requirements cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs. Additional reporting and monitoring may be required by the individual subparts.}*

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

b. *Operating Hours and Operating Days*: An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

c. *Valid Hour*: Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

(1) Hours that are **not operating** hours are **not valid** hours.

(2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid.

{Permitting Note: Data collected during periods when a quality assurance/quality control or span check operation occurs are not valid and data collected during a monitor malfunction are not valid.}

d. *24-hour Block Averages*: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive valid hourly average concentration values. If a unit operates less than 24 hours during the block, or there are less than 24 valid hourly averages available, the 24-hour block average shall be the average of all available valid hourly average concentration values for the 24-hour block. *{Permitting Note: For purposes of determining compliance with the 24-hour CEMS standards, the missing data substitution methodology of 40 CFR Part 75, Subpart D, shall not be utilized. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block and periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance reports. For example, the "24-hr block average" may consist of only 6 valid operating hours for the day.}*

e. *Data Collection:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, SCR tuning and DLN tuning.

f. *Availability*: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated.

[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

25. GHG BACT and NSPS Subpart TTTT Monitoring Requirements:

a. System Requirements: The permittee shall install and certify monitoring systems required for quantifying CO_2 emissions from each CTG in accordance with the applicable requirements in 40 CFR Part 75. Consistent with 40 CFR 75.4(b), all applicable certification tests shall be completed within 180 calendar days after the date the unit commenced commercial operation (as defined in 40 CFR 72.2). Following initial certification, the CO_2 continuous measurement systems shall be quality assured in accordance with the applicable requirements in 40 CFR Part 75. The CO_2 continuous measurement system shall be capable of producing hourly determinations of CO_2 mass emissions in tons per hour.

b. The permittee shall submit an initial monitoring plan that identifies the methodology by which CO_2 mass emissions will be continuously monitored. The permittee shall submit this monitoring plan no later than 21 days prior to the initial certification tests required in **Specific Condition 25.a**.

c. The permittee shall provide notifications as specified in 40 CFR 75.61 for any event related to the continuous measurement of CO_2.

d. The permittee shall measure and record the following data on an hourly basis:
   (1) Gross energy output (MW)
   (2) CO_2 mass emissions (tons or pounds)
   (3) Fuel heat input (MMBtu)

[Rule 62-212.400(BACT), F.A.C, 40 CFR 60.5535, and Application No. 1010524-001-AC]

CEMS AND CO_2 MONITOR REQUIREMENTS FOR ANNUAL EMISSIONS

26. NO_X CEMS and CO_2 Monitor Annual Emissions Requirement: The owner or operator shall use data from the NO_X CEMS and CO_2 monitoring system when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C. In computing the emissions of a pollutant, the owner or operator shall include emissions during periods of startup and shutdown of the emissions unit. [Rules 62-210.200 and 62-210.370(3), F.A.C.]

REPORTING AND RECORDKEEPING REQUIREMENTS

27. Monitoring of Operations: The permittee shall monitor and record the operating rate of the CTG on a daily basis, considering the number of hours of operation during each day (including the times of startup, shutdown, malfunction, SCR tuning and DLN tuning or its equivalent). Such monitoring shall be made by monitoring daily rates of fuel consumption and heat content of the fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

28. Monthly Operations Summary: By the 15th calendar day of each month, the permittee shall record the following in a written or electronic log for the combustion turbines for the previous month of operation: fuel consumption, hours of operation, and the updated calendar year totals. 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), 62-210.200 (PTE) and 62-212.400(BACT), F.A.C.]

29. Fuel Sulfur Records: 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, D5504-94, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions. The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3), 62-4.160(15), and 62-212.400(BACT), F.A.C.]

30. 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(10)(c), F.A.C. and in Appendix D of this permit. Additionally, each report for tests of non-base-load CO shall clearly state the new fuel-specific minimum operating load that is being established as a result of the test. [Rule 62-297.310(8), F.A.C.].

31. 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 one working day of the following: 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 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 and GHG emissions in excess of the BACT permit standards following the NSPS format in 40 CFR 60.7(c), Subpart A. The 12-month rolling average values of GHG emissions subject to the Primary GHG BACT standard, for the three months concluding in the reporting period, shall be included in the report. In addition, the report shall summarize the CO_2 and NO_X CEMS system monitor availability for the previous quarter.

[Rules 62-4.130, 62-204.800, 62-210.700(6) & 62-212.400(BACT), F.A.C., and 40 CFR 60.7 & 60.4375]

OTHER REQUIREMENTS

32. NSPS Requirements: This unit shall comply with the applicable NSPS in 40 CFR 60, including: Subpart A (General Provisions), Subpart KKKK (Standards of Performance for Stationary Gas Turbines), and Subpart TTTT (Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units). See Appendices Subpart A, KKKK, and TTTT of this permit. The BACT emissions standards for NO_X and the fuel sulfur specifications are as stringent as, or more stringent than, the NO_X and sulfur dioxide (SO_2) limits imposed by the applicable NSPS Subpart KKKK provisions. The GHG BACT emissions standards are as stringent as, or more stringent than, the limits imposed by the applicable NSPS Subpart TTTT provisions. Some separate reporting and monitoring may be required by the individual subparts. [Rule 62-204.800(8)(b), F.A.C.; and NSPS 40 CFR 60, Subparts A, KKKK, and TTTT]

{Permitting Note: This unit is not subject to the NESHAP in 40 CFR 63, Subpart YYYY, for stationary combustion turbines. Subpart YYYY applies only to turbines at major sources of hazardous air pollutants (HAP).}

B. Auxiliary Boiler (EU No. 002)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
002	Auxiliary Boiler

NSPS AND NESHAP APPLICABILITY

1. NSPS, Subpart Dc Applicability: The 60 MMBtu/hour (by higher heating value) auxiliary boiler is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Boilers. Specifically, the emissions unit shall comply with 40 CFR 60.48c Reporting and Recordkeeping Requirements. [Rule 62-204.800(b), F.A.C.; 40 CFR 60.48c and Application No. 1010524-001-AC]

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to construct, operate, and maintain one auxiliary boiler with a maximum design heat input of 60 MMBtu/hr. This boiler may be used to provide steam during startups and shutdowns of the combined cycle unit or its steam turbine, and when steam is not available from the HRSG. The boiler shall include low-NO_X burners designed to achieve NO_X emissions less than 0.05 lb/MMBtu and CO emissions less than 0.08 lb/MMBtu. [Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.; and Application No. 1010524-001-AC]

3. Fuel: The auxiliary boiler may burn only natural gas, with a sulfur content less than 2.0 gr./100 scf. [Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C. and Application No. 1010524-001-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Restricted Operation: The permittee may operate this unit no more than 2,000 hours per calendar year. [Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C. and Application No. 1010524-001-AC]

5. Auxiliary Boiler Emissions Limits:

NO_X	CO	SO_2, SAM, $PM/PM_{10}/PM_{2.5}$
0.05 lb/MMBtu	0.08 lb/MMBtu	2.0 gr. S/100 scf natural gas and 20% Opacity

*{Permitting Note: The limits in this table, plus the design and fuel restrictions in **Specific Conditions 2 and 3** serve as continuous emissions limitations for all pollutants.}*

[Rules 62-212.400(BACT) and 62-296.406, F.A.C., and Application No. 1010524-001-AC]

6. Visible Emissions. Visible emissions (VE) from each unit shall not exceed 20 percent opacity except for one six-minute period per one-hour period during which opacity shall not exceed 27 percent. [Rule 62-296.406, F.A.C.]

7. Initial Testing Requirements: The boiler shall be tested to demonstrate initial compliance with the emission standards for CO, NO_X, and VE. 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. As an alternative to testing for CO and NO_X emissions, a manufacturer certification of emissions characteristics for CO and NO_X that are at least as stringent as the BACT values can be used to fulfill CO and NO_X testing requirements. [Rules 62-4.070, 62-212.400(BACT), and 62-297.310(8)(b), F.A.C.]

8. Subsequent Testing Requirements: The permittee shall conduct an annual compliance test for visible emissions. Compliance tests for NO_X and CO shall be conducted prior to each renewal of the facility's Title V operating permit, however no NO_X or CO test will be required if the unit is certified by the manufacturer to meet the NO_X and CO BACT limits. The Department retains the right to require CO or NO_X testing if visible

emission limits are exceeded or for the reasons listed in Rule 62-297.310(8)(c), F.A.C., Special Compliance Test. [Rules 62-4.070, 62-212.400(BACT), and 62-297.310(8)(a)4, F.A.C.]

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

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rule 62-204.800, F.A.C.; and Appendix A of 40 CFR 60]

NOTIFICATION, REPORTING AND RECORDS

10. Fuel Sulfur Records: The permittee shall maintain records of the sulfur content of the natural gas used in the auxiliary boiler. These records shall be submitted to the Compliance Authority on an annual basis and upon request. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

11. Notification: Initial notification is required for the auxiliary boiler. [Rule 62-204.800(8)(b) F.A.C.; and 40 CFR 60.7 & 60.48c]

C. Emergency Diesel Generator (EU No. 003)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
003	Emergency Diesel Generator (1,500 kW)

NSPS AND NESHAP APPLICABILITY

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).

   [Rule 62-204.800(8)(b)80., F.A.C.; and 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

2. NESHAP, Subpart ZZZZ Applicability: The emergency generator is a Stationary Reciprocating Internal Combustion Engine (RICE) located at an area source of hazardous air pollutants emissions and is 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.

   [Rule 62-204.800(11)(b)82., F.A.C.; and 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain one nominal 1,500 kW diesel emergency generator. [Rule 62-210.200(PTE), F.A.C.; and Application No. 1010524-001-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Fuel Specifications: The generator shall burn ULSD fuel oil with a sulfur content of 15 ppm (0.0015%) by weight or less. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.
   [Rules 62-210.200 (PTE) and 62-212.400(BACT), F.A.C.; 40 CFR 60.4207(b) & 80.510(b); and Application No. 1010524-001-AC]

5. Restricted Operation:
   a. *Emergency Situations*. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 60.4211(f)(1)]
   b. *Maintenance and Testing*. This unit is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 60.4211(f)(2)(i)]
   c. *Non-Emergency Situations*. This emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph b., above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]

6. Emergency Generator BACT Emission Limits:

Emergency Generator (> 560 kilowatts)	CO (g/kW-hr)[1]	PM (g/kW-hr)	NMHC[2]+NO_X (g/kW-hr)	Diesel Fuel[3] (sulfur)
2007 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.

[Rule 62-212.400(BACT), F.A.C.; 40 CFR 60.4205]

MONITORING REQUIREMENTS

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

TESTING AND COMPLIANCE REQUIREMENTS

8. Operation and Maintenance. The owner or operator must operate and maintain the engine according to the manufacturer's written instructions. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The RICE must be maintained and operated to meet the emissions limits in **Specific Condition 6** over the entire life of the engine. [40 CFR 60.4206 & 4211(a)]
9. Engine Certification Requirements. The owner or operator must comply with the emissions standards specified above by having purchased an engine certified by the manufacturer to meet those limits. The RICE must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **Specific Condition 10.** [40 CFR 60.4211(c)]
10. Compliance Requirements Due to Loss of Certification. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [40 CFR 60.4211(c) & (g)]
11. Testing Requirements. In the event performance tests are required pursuant to **Specific Condition 10.**, the following requirements shall be met:
    a. *Testing Procedures*. The performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F. Link to Subpart F or the testing procedures outlined in 40 CFR 60.4213.
    b. *NTE Standards*. If 40 CFR Part 1039 Subpart F is used, exhaust emissions from the engine must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard (STD) in **Specific Condition 6**, determined from the following equation:
    NTE Requirement for Each Pollutant = (1.25) x (STD) (Eq. 1)

    [40 CFR 60.4212(a) & (c)]
12. Common Testing Requirements. Except as otherwise specified in this section of the permit, tests shall be conducted in accordance with the requirements and procedures specified in Appendix D, Common Testing

Requirements, of this permit. As long as the certification is maintained and the manufacturer's recommendations are followed for maintenance, no stack testing is required. [Rule 62-297.310, F.A.C.]

RECORDS AND REPORTS

13. Testing Notification. At such time that the requirements of **Specific Condition 11.** become applicable, if at all, the owner or operator shall notify the compliance authority of the date by which the compliance test must be performed. [Rule 62-213.440(1), F.A.C.]
14. Hours of Operation Records. The owner or operator must keep records of the operation of the engine in emergency and non-emergency service 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. [Rule 62-213.440(1), F.A.C. and 40 CFR 60.4214(b)]
15. Maintenance Records. To demonstrate conformance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to **Specific Conditions 10** & **11**, the owner or operator must keep the following records:
    a. Engine manufacturer data indicating compliance with the standards.
    b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
    c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

    [Rule 62-213.440(1), F.A.C.; and, 40 CFR 60.4211(c) & (g)]
16. Other Reporting Requirements. See Appendix C, Common Conditions, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

GENERAL PROVISIONS

17. 40 CFR 60, Subpart A - General Provisions. The owner or operator shall comply with the applicable requirements of 40 CFR 60 Subpart A, General Provisions, as specified below. Link to 40 CFR 60, Subpart A - General Provisions.

General Provisions Citation	Subject of Citation
§ 60.1	General applicability of the General Provisions
§ 60.2	Definitions (see also § 60.4219)
§ 60.3	Units and abbreviations
§ 60.4	Address
§ 60.5	Determination of construction or modification
§ 60.6	Review of plans
§ 60.9	Availability of information
§ 60.10	State Authority
§ 60.12	Circumvention
§ 60.14	Modification
§ 60.15	Reconstruction
§ 60.16	Priority list
§ 60.17	Incorporations by reference
§ 60.19	General notification and reporting requirements

[40 CFR 60.4218]

D. Fire Pump Engine (EU No. 004)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
004	Emergency Fire Pump Engine (347 HP)

NSPS AND NESHAP APPLICABILITY

1. NSPS, Subpart IIII Applicability: The emergency fire pump engine 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).

   [Rule 62-204.800(8)(b)80., F.A.C.; and 40 CFR 60, subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

2. NESHAP, Subpart ZZZZ Applicability: The emergency fire pump engine is a Stationary Reciprocating Internal Combustion Engine (RICE) located at an area source of hazardous air pollutants emissions and is subject to 40 CFR 63, Subpart ZZZZ. Because the emergency fire pump engine is subject to regulation under 40 CFR 60, Subpart IIII, Subpart ZZZZ only requires that the emergency fire pump engine meet the requirements of 40 CFR 60, Subpart IIII. No further requirements of Subpart ZZZZ apply to the emergency fire pump engine.

   [Rule 62-204.800(11)(b)82., F.A.C.; and 40 CFR 63, subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines]

EQUIPMENT SPECIFICATIONS

3. Equipment: The permittee is authorized to install, operate, and maintain one nominal 347-hp ULSD fuel oil fired emergency fire pump engine. [Rules 62-212.400(BACT) and 62-210.200(PTE), F.A.C.; and Application No. 1010524-001-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Fuel Specifications: The emergency fire pump engine shall burn ULSD fuel oil with a sulfur content of 15 ppm (0.0015%) by weight or less. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent. [Rules 62-212.400(BACT) and 62-210.200(PTE), F.A.C.; 40 CFR 60.4207; and Application No. 1010524-001-AC]

5. Restricted Operation:
   a. *Emergency Situations*: There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 60.4211(f)(1)]
   b. *Maintenance and Testing*: This unit is authorized to operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. [40 CFR 60.4211(f)(2)(i)]
   c. *Non-Emergency Situations:* This unit is authorized to operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. [40 CFR 60.4211(f)(3)]

6. Emergency Fire Pump Engine BACT Emission Limits:

Fire Pump Engine (225≤kW<450 or 300≤hp<600)	CO (g/kW-hr) [1]	PM (g/kW-hr)	NMHC [2]+NO_X (g/kW-hr)	Diesel Fuel [3] (sulfur)
2009 and later	3.5	0.20	4.0	15 ppm

1. Nonroad diesel specification from 40 CFR part 80, subpart I – Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel. Link to Non-Road Diesel Spec

[Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.; and 40 CFR 60.4205]

MONITORING REQUIREMENTS

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

TESTING AND COMPLIANCE REQUIREMENTS

8. Operation and Maintenance. The owner or operator must operate and maintain the engine according to the manufacturer's written instructions. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The RICE must be maintained and operated to meet the emissions limits in **Specific Condition 6** over the entire life of the engine. [40 CFR 60.4206 & 4211(a)]

9. Engine Certification Requirements. The owner or operator must comply with the emissions standards specified above by having purchased an engine certified by the manufacturer to meet those limits. The RICE must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in **Specific Condition 10.** [40 CFR 60.4211(c)]

10. Compliance Requirements Due to Loss of Certification. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. [40 CFR 60.4211(c) & (g)]

11. Testing Requirements. In the event performance tests are required pursuant to **Specific Condition 10.**, the following requirements shall be met:
    a. *Testing Procedures*. The performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F. Link to Subpart F or the testing procedures outlined in 40 CFR 60.4213.
    b. *NTE Standards*. If 40 CFR Part 1039 Subpart F is used, exhaust emissions from the engine must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard (STD) in **Specific Condition 6**, determined from the following equation:
    NTE Requirement for Each Pollutant = (1.25) x (STD) (Eq. 1)

    [40 CFR 60.4212(a) & (c)]

12. Common Testing Requirements. Except as otherwise specified in this section of the permit, tests shall be conducted in accordance with the requirements and procedures specified in Appendix D, Common Testing Requirements, of this permit. As long as the certification is maintained and the manufacturer's recommendations are followed for maintenance, no stack testing is required. [Rule 62-297.310, F.A.C.]

RECORDS AND REPORTS

13. Testing Notification. At such time that the requirements of **Specific Condition 11.** become applicable, if at all, the owner or operator shall notify the compliance authority of the date by which the compliance test must be performed. [Rule 62-213.440(1), F.A.C.]

14. Hours of Operation Records. The owner or operator must keep records of the operation of the engine in emergency and non-emergency service 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. [Rule 62-213.440(1), F.A.C. and 40 CFR 60.4214(b)]

15. Maintenance Records. To demonstrate conformance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to **Specific Conditions 10** & **11**, the owner or operator must keep the following records:
    a. Engine manufacturer data indicating compliance with the standards.
    b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
    c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

    [Rule 62-213.440(1), F.A.C.; and, 40 CFR 60.4211(c) & (g)]

16. Other Reporting Requirements. See Appendix C, Common Conditions, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

GENERAL PROVISIONS

17. 40 CFR 60, Subpart A - General Provisions. The owner or operator shall comply with the applicable requirements of 40 CFR 60 Subpart A, General Provisions, as specified below. Link to 40 CFR 60, Subpart A - General Provisions.

General Provisions Citation	Subject of Citation
§ 60.1	General applicability of the General Provisions
§ 60.2	Definitions (see also § 60.4219)
§ 60.3	Units and abbreviations
§ 60.4	Address
§ 60.5	Determination of construction or modification
§ 60.6	Review of plans
§ 60.9	Availability of information
§ 60.10	State Authority
§ 60.12	Circumvention
§ 60.14	Modification
§ 60.15	Reconstruction
§ 60.16	Priority list
§ 60.17	Incorporations by reference
§ 60.19	General notification and reporting requirements

[40 CFR 60.4218]

E. Mechanical Draft Cooling Tower (EU No. 005)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
005	Mechanical Draft Auxiliary Cooling System

EQUIPMENT SPECIFICATIONS

1. Mechanical Draft Cooling Tower: The permittee is authorized to install one mechanical draft cooling tower with the following nominal design characteristics: 6 cells; 51.2 feet high; circulating water flow rate of 94,258 gallons per minute; and drift eliminators with a drift rate of no more than 0.0005%. [Application No. 1010524-001-AC]

EMISSIONS AND PERFORMANCE REQUIREMENTS

2. Drift Rate: Within 60 days of commencing commercial operation, the permittee shall submit manufacturer specification sheets as certification to the Department 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(10)(BACT), F.A.C.]

HOURS OF OPERATION

3. Hours of Operation: The hours of operation are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

F. Circuit breakers (EU No. 006)

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
006	Two Circuit Breakers

EQUIPMENT SPECIFICATIONS

1. Equipment: The permittee is authorized to construct, operate, and maintain two circuit breakers containing sulfur hexafluoride (SF_6). The circuit breakers must have a manufacturer-designed SF_6 leak rate of no more than 0.5% per year. The circuit breakers must be equipped with leakage detection systems. [Rule 62-212.400(BACT), F.A.C., and Application No. 1010524-001-AC]

CIRCUIT BREAKER MONITORING PLAN

2. Monitoring Plan Requirements: Within 180 days after the circuit breakers are placed into service, the permittee shall submit to the Department a circuit breaker monitoring plan detailing the number and location of circuit breakers installed and procedures for detecting leaks from the circuit breakers and expected remedial courses of action after leaks are detected. [Rule 62-212.400(BACT), F.A.C., and Application No. 1010524-001-AC]

HOURS OF OPERATION

3. Hours of Operation: The hours of operation of are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]