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DEP File No. 0090006-005-AC
FPL Cape Canaveral Energy Center
Plant Conversion Project
Brevard County
SIC No. 4911
Expires: December 31, 2014

PROJECT AND LOCATION

This permit authorizes the construction of one nominal 1,250 megawatts (MW) combined cycle unit and ancillary equipment at the FPL Cape Canaveral Energy Center previously known as the Cape Canaveral Plant.

Two existing steam generators designated with a total nominal capacity of 800 MW will be shut down and dismantled as part of this project.

The proposed project will be located at 6000 North U.S. Highway 1 between Cocoa and Titusville in Brevard County. The UTM coordinates are Zone 17, 523.1 kilometers (km) East and 3,149 km North.

STATEMENT OF BASIS

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), 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 install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Joseph Kahn, Director
Division of Air Resource Management

7/23/09
(Date)

FACILITY DESCRIPTION

FPL operates the Cape Canaveral Plant (CCP), which is an existing power plant (SIC No. 4911). The plant currently consists of two steam generating units designated as Units 1 and 2 that produce 400 MW each of electrical power. Units 1 and 2 use residual fuel oil and natural gas. There are two 397-foot stacks, two fuel oil storage tanks, water intake structures for once-through cooling and other ancillary equipment.

The project is a plant conversion that includes the construction of a nominal 1,250 MW natural gas-fueled combined cycle unit (Unit 3) and requires the permanent shutdown and dismantling of Units 1 and 2. The converted plant will be called the Cape Canaveral Energy Center (CCEC). Unit 3 will consist of:

- Three nominal 265 MW combustion turbine-electrical generators (CTG) with evaporative inlet cooling systems;
- Three supplementary-fired heat recovery steam generators (HRSG) with selective catalytic reduction (SCR) reactors;
- Three maximum 460 million Btu per hour, lower heating value (mmBtu/hr, LHV), natural gas-fueled duct burners (DB) located in the three HRSG (one DB/HRSG);
- Three 149-feet exhaust stacks; and
- One common nominal 500 MW steam-electrical generator (STG).

Unit 3 will use ultralow sulfur distillate (ULSD) fuel oil as backup fuel. Unit 3 will rely on some of the existing infrastructure including one of the fuel oil storage tanks.

Additional ancillary equipment to be installed includes: a permanent auxiliary boiler; a temporary boiler used during the construction phase; two emergency generators; two process (fuel) heaters; a diesel fire pump; and a gas compression station. The details of the equipment to be installed are listed in the table below.

The project includes and requires the permanent shutdown and dismantlement of Units 1 and 2 and the respective stacks as well as one of the fuel oil storage tanks. When emissions from Unit 3 are considered and offset by reductions from the shut down and dismantlement of Units 1 and 2, there will not be a significant net emission increase in any PSD pollutant.

{Note: Throughout this permit, the electrical generating capacities represent nominal values for the given operating conditions.}

NEW EMISSIONS UNITS

This permit authorizes construction and installation of the following new emissions units.

ID	Emission Unit Description
006	Unit 3A – one nominal 265 MW CTG with supplementary-fired HRSG
007	Unit 3B – one nominal 265 MW CTG with supplementary-fired HRSG
008	Unit 3C – one nominal 265 MW CTG with supplementary-fired HRSG
009	One nominal 85,000 pounds per hour (lb/hr) auxiliary boiler (99.8 mmBtu/hr)
010	Two nominal 10 mmBtu/hr natural gas-fired process heaters (one is a spare)
011	Seven nominal 1,340 horsepower (hp) natural gas compressors
012	Two nominal 2,250 kilowatts (kW) liquid fueled emergency generators
013	One nominal 300-hp emergency diesel fire pump engine and 500 gallon fuel oil storage tank
014	One temporary 110 mmBtu/hr natural gas-fueled boiler to be used only during construction

REGULATORY CLASSIFICATION

The CCP is a "Major Stationary Source" as defined in Rule 62-210.200, Florida Administrative Code (F.A.C.). The CCEC project does not trigger the rules for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. and does not require a best available control technology (BACT) determination.

The CCEC will be a Title V or "Major Source" of air pollution in accordance with Chapter 213, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC) and sulfuric acid mist (SAM).

The CCEC will be subject to several subparts under 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources (NSPS). Unit 3 is subject to 40 CFR 60, Subpart KKKK – NSPS for Stationary Combustion Turbines that Commence Construction after February 18, 2005. This rule also applies to duct burners (DB) that are incorporated into combined cycle projects.

Two emergency generators will be subject to 40 CFR 60, Subpart IIII – NSPS for Stationary Compression Ignition Internal Combustion Engines.

Natural gas compressors will be subject to 40 CFR 60, Subpart JJJJ – NSPS for Stationary Spark Ignition Internal Combustion Engines.

The temporary natural gas-fueled boiler will be subject to 40 CFR 60, Subpart Db – NSPS for Industrial-Commercial-Institutional Steam Generating Units.

The auxiliary boiler and two process (fuel) heaters will be subject to 40 CFR 60, Subpart Dc – NSPS Requirements for Small Industrial-Commercial-Institutional Steam Generating Units.

The CCEC will be a minor (area source) of hazardous air pollutants (HAP). The CCEC will include emission units that will be subject to certain area source provisions of 40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants (NESHAP). The specific subpart is 40 CFR 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE).

The CCEC will operate units subject to the Title IV Acid Rain provisions of the Clean Air Act (CAA).

The CCEC 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 project is subject to certification under the Florida Power Plant Siting Act, 403.501-518, Florida Statutes (F.S.) and Chapter 62-17, F.A.C.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A: Identification of General Provisions Subpart A from NSPS 40 CFR 60 and Subpart A from NESHAP 40 CFR 63.

Appendix GC: General Conditions.

Appendix Db: NSPS Subpart Db Requirements for Industrial-Commercial-Institutional Steam Generating Units.

Appendix Dc: NSPS Subpart Dc Requirements for Small Industrial Commercial-Institutional Steam Generating Units.

Appendix IIII: NSPS Requirements for Compression Ignition Internal Combustion Engines.

Appendix JJJJ: NSPS Requirements for Stationary Spark Ignition Internal Combustion Engines.

Appendix KKKK: NSPS Requirements for Gas Turbines, 40 CFR 60, Subpart KKKK.

Appendix SC: Standard Conditions.

Appendix XS: Semiannual NSPS Excess Emissions Report.

Appendix ZZZZ: NESHAP Requirements for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Permit application received on December 30, 2008;
- Supplemental information received on February 11, 2009;
- Draft permit package issued on March 13, 2009; and
- Final Determination accompanying final permit issued on July 23, 2009.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify an emissions unit shall be submitted to the Permitting Authority, which is the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP or the Department) at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority. Telephone: (850)488-0114. Fax: (850)921-9533.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office. The mailing address and phone number of the Central District Office are: Department of Environmental Protection, Central District Office, 3319 Maguire Boulevard, Suite 232, Orlando Florida 32803-3767. Telephone: (407)894-7555. Fax: (407)897-5963.

3. Appendices: The following Appendices are attached as part of this permit: Appendices A, Db, Dc, GC (General Conditions), IIII, JJJJ, KKKK, SC, XS and 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, 62-214, 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 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 Bureau of Air Regulation 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.]

8. Permanent Shutdown and Dismantlement of Units 1 and 2: Units 1 and 2 shall be permanently shut down and dismantled before December 31, 2011.
[Application and Avoidance of Rule 62-212.400(4) through (12), F.A.C.]

9. Source Obligation: 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. [Rule 62-212.400(12)(b), F.A.C.]

10. Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency (EPA) in Atlanta, Georgia. This permit does not specify the Acid Rain program requirements. These will be included in the Title V air operation permit. [40 CFR 72]

11. Title V Permit: This permit authorizes specific modifications and/or new construction on 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 Bureau of Air Regulation with copies to the Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III - EMISSIONS UNITS SPECIFIC CONDITIONS

A. UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 006, 007, and 008)

This section of the permit addresses the following emissions units.

Unit 3 and associated equipment
Description: Unit 3 will be comprised of emissions units (EU) 006, 007, and 008. Each EU will consist of: a CTG with automated control, inlet air filtration system and evaporative cooling, a gas-fired HRSG with DB, a HRSG stack, and associated support equipment. The project also includes one STG that will serve the combined cycle unit. **Fuels**: Each CTG fires natural gas as the primary fuel and ULSD fuel oil as a restricted alternate fuel. **Generating Capacity**: Each of the three CTG has a nominal generating capacity of 265 MW. The STG has a nominal generating capacity of 500 MW. The total nominal generating capacity of the "3 on 1" combined cycle unit is approximately 1,250 MW. **Controls**: The efficient combustion of natural gas and restricted firing of ULSD fuel oil minimizes the emissions of CO, PM/PM_{10}, SAM, SO_2 and VOC. Dry Low-NO_X (DLN) combustion technology for gas firing and water injection for oil firing reduce NO_X emissions. A SCR system further reduces NO_X emissions. **Stack Parameters**: Each HRSG has a stack at least 149 feet tall with a nominal diameter of 22 feet. The Department may require the permittee to perform additional air dispersion modeling should the actual specified stack dimensions change. **Continuous Monitors**: Each stack is equipped with continuous emissions monitoring systems (CEMS) to measure and record CO and NO_X emissions as well as flue gas oxygen or carbon dioxide content.

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: The CTG shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Department determines that compliance with the emissions standards in Condition 10 below also assures compliance with the New Source Performance Standards given in 40 CFR 60, Subpart KKKK. Some separate reporting and monitoring may be required by the individual subparts.

   a. *Subpart A, General Provisions*, including:
      - 40 CFR 60.7, Notification and Record Keeping
      - 40 CFR 60.8, Performance Tests
      - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
      - 40 CFR 60.12, Circumvention
      - 40 CFR 60.13, Monitoring Requirements
      - 40 CFR 60.19, General Notification and Reporting Requirements

   b. *Subpart KKKK, Standards of Performance for Stationary Gas Turbines*: These provisions include standards for CTG and DB.

EQUIPMENT AND CONTROL TECHNOLOGY

2. Combustion Turbines-Electrical Generators (CTG): The permittee is authorized to install, tune, operate, and maintain three "G" or "H" technology CTG each with a nominal generating capacity of 265 MW. Each CTG shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system and an evaporative inlet air-cooling system. The CTG will utilize DLN combustors. [Application and Design]

3. Heat Recovery Steam Generators (HRSG): The permittee is authorized to install, operate, and maintain three new HRSG with separate exhaust stacks. Each HRSG shall be designed to recover exhaust heat energy from one of the three CTG (3A to 3C) and deliver steam to the steam turbine-electrical generator (STG). Each HRSG may be equipped with a gas-fired duct burner (DB) having a maximum heat input rate of 460 mmBtu per hour (LHV).

4. CTG/Supplementary-fired HRSG Emission Controls

   a. *Dry Low NO_X (DLN) Combustion*: The permittee shall operate and maintain the DLN system to control NO_X emissions from each CTG when firing natural gas. Prior to the initial emissions performance tests required for each CTG, the DLN combustors and automated control system shall be tuned to achieve sufficiently low CO and NO_X values to meet the CO and NO_X limits with the additional SCR control technology described below. Thereafter, each turbine shall be maintained and tuned in accordance with the manufacturer's recommendations.

   b. *Wet Injection (WI)*: The permittee shall install, operate, and maintain a WI system (water or steam) to reduce NO_X emissions from each CTG when firing ULSD fuel oil. Prior to the initial emissions performance tests required for each CTG, the WI 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, each turbine shall be maintained and tuned in accordance with the manufacturer's recommendations.

   c. *Selective Catalytic Reduction (SCR) System*: The permittee shall install, tune, operate, and maintain an SCR system to control NO_X emissions from each CTG when firing either natural gas or distillate fuel oil. 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 and NH_3 emissions.

   d. *Oxidation Catalyst*: The permittee shall design and build the project to facilitate possible future installation of an oxidation catalyst system to control CO emissions from each CTG/supplementary-fired HRSG.

   e. *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 and Design; Rule 62-4.070, F.A.C.]

A. UNIT 3 – COMBUSTION TURBINE GENERATORS (EU 006, 007, and 008)

PERFORMANCE RESTRICTIONS

5. Permitted Capacity – Combustion Turbine-Electric Generators (CTG): The maximum heat input rate to each CTG is 2,586 mmBtu per hour when firing natural gas and 2,440 mmBtu per hour when firing distillate fuel oil (based on a compressor inlet air temperature of 59° F, LHV of each fuel, and 100% load). Heat input rates will vary depending upon CTG 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. 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.]

6. Permitted Capacity - HRSG Duct Burners (DB): The total maximum heat input rate to the DB for each HRSG is 460 mmBtu per hour based on the LHV of natural gas. Only natural gas shall be fired in the DB. [Rule 62-210.200(PTE), F.A.C.]

7. Authorized Fuels: The CTG 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 may fire ULSD fuel oil containing no more than 0.0015% sulfur by weight. Fuel oil may be fired up to the fuel equivalent of 3,000 hours aggregated over the three CTG during any calendar year. [Rules 62-210.200(PTE), F.A.C.]

8. Hours of Operation: Subject to the operational restrictions of this permit, the CTG may operate throughout the year (8760 hours per year). Restrictions on individual methods of operation are specified below. [Rules 62-210.200(Definitions - PTE), F.A.C.]

9. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTG may operate under the following methods of operation.

   a. *Combined Cycle Operation*: Each CTG/HRSG system may operate to produce direct, shaft-driven electrical power and steam-generated electrical power from the steam turbine-electrical generator as a three-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. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling system may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.

   c. *Duct Burner (DB) Firing*: When firing natural gas in a CTG, the respective HRSG may fire natural gas in the DB to raise additional steam for use in the STG or in the operation of CTG components. The total combined heat input rate to the DB (all three HRSG) shall not exceed 3,697,920 mmBtu (LHV) during any consecutive 12 months.

   [Application; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

10. Emissions Standards: Emissions from each CTG/DB shall not exceed the following standards developed under state implementation plan (SIP) permitting procedures. Compliance with these limits also assures compliance with the emission limitations in 40 CFR 60, Subpart KKKK.

Pollutant	Fuel	Method of Operation	Initial Stacks Tests		CEMS Rolling Average Limit
			ppmvd [a]	lb/hr [b]	ppmvd [a]
CO [d]	Oil	CTG	10.0	61.0	10.0, 30 unit operating days [c,d]
	Gas	CTG & DB	7.6	52.7	8.0, 30 unit operating days [c,d]
		CTG Normal Mode	5.0	29.0	
NO_X [e]	Oil	CTG	8.0	80.0	8.0, 30 unit operating days [c,e]
	Gas	CTG & DB	2.0	22.8	2.0, 30 unit operating days [c,e]
		CTG Normal Mode	2.0	19.3	
VOC [f]	Oil	CTG	6.0	18.9	NA
	Gas	CTG & DB	1.9	7.2	
		CTG Normal Mode	1.5	4.8	
NH_3 [g]	Oil/Gas	CTG, All Modes	5	NA	NA
SAM/SO_2 [h]	Oil/Gas	All Modes	2 gr S/100 SCF of gas, 0.0015% sulfur fuel oil Visible emissions shall not exceed 10% opacity for each 6-minute block average.		
PM/PM_{10} [i]					

a. Concentration standards are given in terms of parts per million, by volume, dry at 15 percent oxygen and abbreviated as ppmvd.
b. The mass emission rate standards in pounds per hour (lb/hr) are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations filed with the Department.
c. "Unit operating day" means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period. [40 CFR 60.4420]
d. Compliance with the continuous 30-unit operating days rolling CO standard shall be demonstrated based on data collected by the required CEMS. The initial EPA Method 10 tests associated with the certification of the CEMS instruments shall also be used to demonstrate initial performance guarantees for natural gas, oil, and DB mode.
e. Continuous compliance with the 30-unit operating days rolling NO_X standards shall be demonstrated based on data collected by the required CEMS and will also insure compliance with the less stringent Subpart KKKK limits of 15 and 42 ppmvd for gas and fuel oil respectively on a 30-unit operating day rolling average basis. The initial EPA Method 7E or Method 20 tests associated with demonstration of compliance with 40 CFR 60, Subpart KKKK or certification of the CEMS instruments shall also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, and duct burner modes during the time of those tests. NO_X mass emission rates are defined as oxides of nitrogen expressed as nitrogen dioxide (NO_2).
f. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane.
g. Compliance with the NH_3 slip standard shall be demonstrated by conducting tests in accordance with EPA Method CTM-027 or EPA Method 320.
h. The clean fuel sulfur specifications and visible emissions standard effectively limit the potential emissions of SAM and SO_2 from the CTG. Compliance with the fuel sulfur specifications shall be determined by the ASTM methods for determination of fuel sulfur as detailed in the draft permit.
i. The clean fuel sulfur specifications, low CO and NO_X limits, and the visible emissions standard will effectively limit $PM/PM_{10}/PM_{2.5}$ emissions. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.

[Application and Avoidance of Rule 62-212.400(4) through (12), F.A.C.; 40 CFR 60, Subpart KKKK]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 10 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, or Acid Rain programs.}

11. Operating Procedures: The emission standards established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the CTG, DB, HRSG, 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 of minimizing excess emissions. [Rules 62-4.070(3), F.A.C.]

12. Alternate Visible Emissions Standard: Visible emissions due to startups, shutdowns, 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. [Applicant Request and Rule 62-4.070(3), F.A.C.]

13. Definitions:

    a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]

    b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]

    c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

14. 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.]

15. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, fuel switching and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. For each CTG/HRSG system, excess emissions of NO_X and CO resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. 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.

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

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

    b. *Shutdown Steam Turbine System*: For shutdown of steam turbine system, excess NO_X and CO emissions from any CTG/HRSG system shall not exceed three (3) hours in any 24-hour period.

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

d. *Fuel Switching*: For fuel switching, excess NO_X and CO emissions shall not exceed two (2) hours in any 24-hour period.

16. 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 conditions allow excess emissions only for specifically defined periods of startup, shutdown, fuel switching, and documented malfunction of the CTG.
[Design; Rules 62-4.070(3) and 62-210.700, F.A.C.]

17. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions may be excluded by the permittee from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" may occur after completion of initial construction, a major repair, or other similar circumstances. Prior to performing any major tuning session, where the intent is to exclude data from the CEMS compliance demonstration, the permittee shall provide the Compliance Authority with an advance notice of at least 7 days 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.]

EMISSIONS PERFORMANCE TESTING

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

Method	Description of Method and Comments
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
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 {Notes: The method shall be based on a continuous sampling train. The ascarite trap may be omitted or the interference trap of section 10.1 may be used in lieu of the silica gel and ascarite traps.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used for compliance testing unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.
[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

19. Initial Compliance Determinations: Initial compliance tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of the unit, unless the alternate initial compliance test timeline in Condition 20 applies. Each CTG shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X, VOC, visible emissions, and ammonia slip. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Referenced method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_X standards. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO and NO_X mass rate emissions standards. CO and NO_X emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

20. Initial Compliance Determinations if "H" Technology CTG are Utilized: In the event CTG incorporating "H" level technology are selected for use at the CCEC, the initial compliance tests for the first, and only for the first, installed CTG to demonstrate achievement of the emission limits listed in Specific Condition 10 above shall be conducted within 180 days after achieving the maximum production rate at which the unit will be operated, but not later than 300 days after the initial startup of the unit.

    {The additional 120 day test period may be required to allow comprehensive commissioning, testing, and tuning of the "H" technology CTG. This condition does not exempt the CTG from the applicable requirements in 40 CFR 60, Subpart A or in 40 CFR 60, Subpart KKKK.}

21. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 30-unit operating days rolling average CO and NO_X emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds.
    [Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subpart KKKK]

22. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CTG shall be tested to demonstrate compliance with the emission standards for visible emissions and ammonia slip. Testing to determine the ammonia slip shall be conducted while firing the primary fuel. NO_X emissions recorded by the CEMS shall be reported for each ammonia slip test run. CO emissions recorded by the CEMS shall be reported for the visible emissions observation period.

    {Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing if CO limits are exceeded or for the reasons given in Appendix SC, Condition 17, Special Compliance Tests.}

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

23. 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 29, the visible emissions standard and the CO/NO_X continuous monitoring. [Rule 62-4.070(3), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

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

    a. *CO Monitors:* For each CTG, the CO monitor~~s~~ shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. If "H" technology CTG are utilized, the described certification shall be performed on the CEMS associated with the first, and only with the first, installed CTG within 180 calendar days of achieving permitted capacity, but no later than 300 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report in Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.

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

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

25. 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% oxygen. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_X as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to International Organization of Standardization (ISO) conditions.

    b. *Valid Hour*: Hourly average values shall begin at the top of each hour. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value

shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, the hourly average value is not valid. An hour in which any oil is fired is attributed towards compliance with the permit standards for oil firing. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly average values.

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

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

d. *Data Exclusion:* Each CEMS shall monitor and record emissions during all operations including episodes of startup, shutdown, malfunction, fuel switches and DLN tuning. Some of the CEMS emissions data recorded during these episodes may be excluded from the corresponding CEMS compliance demonstration subject to the provisions of Condition Nos. 15 and 17 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, DLN tuning) may be used for the appropriate exclusion periods. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable. Data recorded during such episodes shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during such episodes. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited.

e. *Data Exclusion during Installation of Oxidation Catalyst:* The permittee may exclude CO CEMS data in excess of the 8.0 ppmvd @15% O_2 from the 30 operating day rolling average calculation during the installation of the oxidation catalyst (which shall not exceed 12 months) provided all reasonable efforts are used to minimize such emissions. However, all CEMS data must be included when determining whether there is a net emission increase [as defined in Section 62-210.200 (definitions), F.A.C.] of CO greater or equal to the significant emissions rate of 100 tons per year.

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) and 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; and Rules 62-4.070(3), F.A.C.]

26. 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 by the time of 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 are consistent with the documented flow rate for the combustion turbine load condition. [Rules 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

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

28. 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, hours of duct firing, 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.]

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

    a. *Natural Gas:* Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D4468-85, D5504-01, D6228-98 and D6667-01, D3246-81 or more recent versions.

    b. *ULSD Fuel Oil:* Compliance with the distillate fuel oil sulfur limit shall be demonstrated by taking a sample, analyzing the sample for fuel sulfur, and reporting the results to each Compliance Authority before initial startup. Sampling the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM methods D5453-00, D129-91, D1552-90, D2622-94, or D4294-90. More recent versions of these methods may be used. For each subsequent fuel delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the fuel vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

    The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 75, Appendix D. [Rules 62-4.070(3) and 62-4.160(15), 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(8)(c), F.A.C. and in Appendix SC of this permit. [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 (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 CO and NO_X emissions in excess of the permit emission standards following the NSPS format in 40 CFR 60.7(c), Subpart A. Periods of startup, shutdown and malfunction, shall be monitored, recorded and reported as excess emissions when emission levels exceed the standards specified in this permit. 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 CTG are defined as: a specified averaging period over which either the NO_X emissions are higher than the applicable emission limit in 40 CFR 60.4320; or the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in 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.}

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

32. 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 distillate fuel oil for the fuel oil storage tank for use in the Annual Operating Report. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year. [Rule 62-210.370(2), F.A.C.]

B. AUXILIARY BOILER AND TEMPORARY CONSTRUCTION BOILER (009 AND 014)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
009	One nominal 85,000 pounds per hour (lb/hr) natural gas fueled auxiliary boiler (99.8 mmBtu/hr)
014	One temporary 110 mmBtu/hr natural gas-fueled boiler to be used only during construction

AUXILIARY BOILER REQUIREMENTS

1. Equipment: The permittee is authorized to install, operate, and maintain one auxiliary boiler with a maximum design heat input of 99.8 mmBtu/hr (85,000 lb/hr) to produce steam during start up of the CTG. The permittee is authorized to operate the auxiliary boiler during the construction period of Unit 3, as well as during permanent operation after the completion of construction.
   [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation: The hours of operation of the auxiliary boiler shall not exceed 1000 hours per year.
   [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

3. NSPS Subpart Dc Applicability: The auxiliary boiler is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Steam Generating Units. Specifically, this emission unit shall comply with 40 CFR60.48c Reporting and Recordkeeping Requirements. [40 CFR 60, NSPS-Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Dc].

4. Auxiliary Boiler Emissions Limits: The auxiliary boiler shall comply with the following emission limits.

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.05 lb/mmBtu	0.08 lb/mmBtu	2 gr S/100 SCF natural gas spec and 10% Opacity

   [Applicant request; Rule 62-4.070(3), F.A.C.]

   {Permitting note: There are no Subpart Dc emission standards for auxiliary boilers fueled by natural gas.}

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

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources

6. Notification: Initial notification is required for the auxiliary boiler pursuant to 40 CFR 60.7.

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

B. AUXILIARY BOILER AND TEMPORARY CONSTRUCTION BOILER (009 AND 014)

TEMPORARY BOILER REQUIREMENTS

8. Equipment: The permittee is authorized to install, operate, and maintain a temporary boiler during the construction of the CCEC with a maximum design heat input of 110 mmBtu/hr.
[Applicant Request; Rule 62-210.200(PTE), F.A.C.]

9. Hours of Operation: The hours of operation of the temporary boiler shall not exceed 1,000 hours per year and the temporary boiler shall not operate beyond the expiration date of this permit.
[Applicant Request; Rule 62-210.200(PTE), F.A.C.]

10. NSPS Subpart Db Applicability: The temporary 110 mmBtu natural gas-fueled boiler is subject to all applicable requirements of 40 CFR 60, Subpart Db which applies to Industrial, Commercial, or Institutional Steam Generating Units.
[40 CFR 60, NSPS-Subpart Db - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Db].

C. PROCESS HEATERS (EU 010)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
010	Two nominal 10 mmBtu/hr natural gas-fired process heaters (one is a spare)

1. Equipment: The permittee is authorized to install, operate, and maintain two 10 mmBtu/hr process heaters for the purpose of heating the natural gas supply to the CTG.
[Applicant Request and Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation: The two natural gas-fueled process heaters are allowed to operate a combined total of 8760 hours per year. [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

3. NSPS Subpart Dc Applicability: Each process heater is subject to all applicable requirements of 40 CFR 60, Subpart Dc which applies to Small Industrial, Commercial, or Institutional Boiler. Specifically, each emission unit shall comply with 40 CFR60.48c Reporting and Recordkeeping Requirements.
[40 CFR 60, NSPS-Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, attached as Appendix Dc]

4. Emission Limits: Each natural gas fired process heater shall comply with the following emission limits.

NO_X	CO	VOC, SO_2, PM/PM_{10}
0.095 lb/mmBtu	0.08 lb/mmBtu	2 gr S/100 SCF natural gas spec and 10% Opacity

[Applicant request; Rule 62-4.070(3), F.A.C.]

{Permitting note: There are no Subpart Dc emission standards for gas-fired process heaters fueled by natural gas.}

5. Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. As an alternative, a Manufacturer certification of emissions characteristics of the purchased model that are at least as stringent as the emission limits values can be used to fulfill this requirement.
[Rule 62-297.310(7)(a)1, F.A.C.]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources

6. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas used in the process heaters and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 60.48c and 40 CFR 60.7. These records shall be submitted to the Compliance Authority on an annual basis or upon request.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subparts A and Dc]

D. COMPRESSOR STATION (EU 011)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
011	Seven nominal 1,340 horsepower (hp) natural gas compressors

1. Equipment: The permittee is authorized to install, operate, and maintain seven nominal 1,340 horsepower (hp) natural gas compressors. Maximum heat input shall not exceed 10.11 mmBtu/hr each.
[Applicant Request and Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation and Fuel Specifications: Each compressor is allowed to operate continuously (8760 hr/yr). The compressors are allowed to burn natural gas only.
[Applicant Request and Rule 62-210.200(PTE), F.A.C.]

3. NSPS Subpart JJJJ Applicability: These compressors are Stationary Spark Ignition Internal Combustion Engines and shall comply with applicable provisions of 40 CFR 60, Subpart JJJJ.
[40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]

4. NESHAPS Subpart ZZZZ Applicability: These compressors are Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the compressors must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

5. Pollution Control Equipment: Each gas compressor shall be equipped with an oxidation catalyst to control CO and VOC/hydrocarbons. [Applicant request; Rule 62-4.070(3), F.A.C.]

6. Visible Emission (VE) Limit: Each natural gas compressor shall comply with a visible emission limit of 10% opacity. [Applicant request; Rule 62-4.070(3), F.A.C.]

7. Emissions Limits: Each natural gas compressors shall comply with the following emission limits.

Standard (manufacture date)	CO (g/hp-hr)[a]	VOC (g/hp-hr)	NO_X (g/hp-hr)	PM (g/hp-hr)	SO_2 (gas S spec.)
Permit Emission Limit	0.10	0.16	1.5[b]	0.034	2 gr/100 SCF
Subpart JJJJ (1/1/2008)	4.0	1.0	2.0	NA	
Subpart JJJJ (7/1/2010)	2.0	0.7	1.0		

a. grams per horsepower-hour (g/hp-hr)

b. Reduced to 1.0 g/hp-hr if manufacture date is 7/1/2010 or later to insure compliance with Subpart JJJJ.

{Permitting note: Installation of an oxidation catalyst and adherence to the visible emission standard and fuel specification shall be considered sufficient to insure compliance with the listed PM limit.}

[Applicant request; 40 CFR 60, Subpart JJJJ; Rule 62-4.070(3), F.A.C.]

8. Compressor Testing Requirements: Each unit shall be stack tested to demonstrate initial compliance with the emission standards for CO, VOC, NO_X and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. With the exception of visible emissions testing, manufacturer certification can be provided to the Department in lieu of actual testing.
[Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8 and 40 CFR 60.4244]

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

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources
18	Determination of Volatile Organic Compounds Emissions from Stationary Sources

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

10. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas used in the compressor station and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 60.4245 and 40 CFR 60.7. These records shall be submitted to the Compliance Authority on an annual basis or upon request.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subparts A and JJJJ]

E. EMERGENCY GENERATORS (012)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
012	Two nominal 2,250 kilowatts (kW) liquid fueled emergency generators

1. Equipment: The permittee is authorized to install, operate, and maintain two 2,250 kW emergency generators. [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 160 hours per year per generator. The generators shall burn ultralow sulfur diesel fuel oil (0.0015% sulfur). [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

3. NSPS Subpart IIII Applicability: These emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII, including emission testing or certification. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

4. NESHAPS Subpart ZZZZ Applicability: These emergency generators are Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the compressors must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

5. Emissions Limits: Each emergency generator shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII. Manufacturer certification can be provided to the Department in lieu of actual stack testing.

Source (model year)	**CO** (g/hp-hr)	**PM** (g/hp-hr)	**Hydrocarbons** (g/hp-hr)	**NO_X** (g/hp-hr)
Subpart IIII (2007-2010)	8.5	0.4	1.0	6.9
Subpart IIII (2011 and later)	2.6	0.15	4.8 (NMHC[a]+NO_X)	

a. NMHC means Non-Methane Hydrocarbons.

[Applicant Request; 40 CFR 60, Subpart IIII and Rule 62-4.070(3), F.A.C.]

6. Visible Emission (VE) Limit: Each liquid-fueled emergency generator shall comply with a visible emission limit of 10% opacity. An initial VE test shall be conducted in accordance with EPA Method 9 within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup. [Applicant request; Rule 62-4.070(3), F.A.C.]

7. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of fuel oil used in the emergency generators and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 60.4214 and 40 CFR 60.7. These records shall be submitted to the Compliance Authority on an annual basis or upon request.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60, Subparts A and IIII]

F. EMERGENCY FIRE PUMP (013)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
013	One emergency diesel fire pump engine (≤ 300 hp) and a nominal 500 gallon fuel oil storage tank

1. Equipment: The permittee is authorized to install, operate, and maintain one diesel engine driven fire pump (≤ 300 hp) and an associated nominal 500 gallon fuel oil storage tank.
[Applicant Request and Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation: The fire pump may operate in response to emergency conditions and 80 non-emergency hours per year for maintenance testing. [Applicant Request; Rule 62-210.200 (PTE), F.A.C.]

3. Authorized Fuel: This unit shall fire ULSD fuel oil, which shall contain no more than 0.0015% sulfur by weight. [Applicant Request]

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

5. Emissions Limits: The emergency fire pump engine shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII.

Model Year	**CO** (g/hp-hr)	**NMHC + NO_X** (g/hp-hr)	**PM** (g/hp-hr)
Subpart IIII (2008)	2.6	7.8	0.40
Subpart IIII (2009 or later)	NA	3.0	0.15

[Applicant Request; 40 CFR 60, Subpart IIII and Rule 62-4.070(3), F.A.C.]

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