DRAFT

PERMITTEE

Florida Municipal Power Agency (FMPA)
8553 Commodity Circle
Orlando, Florida 32819

Authorized Representative:
Mr. Roger Fontes, General Manager and CEO

Permit No. 0970043-018-AC/PSD-FL-400A
Cane Island Power Park
Unit 4 Permit Revisions
Osceola County, Florida
Expires: December 31, 2011

PROJECT AND LOCATION

This is the final air construction permit authorizing the revision of several specific conditions of permit No. 0970043-014-AC/PSD-FL-400 for combined cycle Unit 4. The facility is located in Osceola County at 6075 Old Tampa Highway, Intercession City. The UTM coordinates for this site are 447.5 km East and 3128.0 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.

Changes to previously established permitting language is indicated by ~~strikethrough~~ formatting to indicate deletions and by double underline formatting to indicate new text.

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 and as described in the application, approved drawings, plans, and other documents on file with the Department. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C.

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

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

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FACILITY AND PROJECT DESCRIPTION

Existing Facility

Florida Municipal Power Agency (FMPA) and the Kissimmee Utilities Authority (KUA) jointly own the Cane Island Power Park (CIPP), which is located in Osceola County at 6075 Old Tampa Highway, Intercession City, Florida. The site is located approximately 105 km southeast from the Chassahowitzka National Wildlife Area; the nearest Federal Prevention of Significant Deterioration (PSD) Class I Area. The UTM coordinates are 447.5 km East and 3128.0 North.

This facility is a 710 MW electric power generating plant. This facility's emissions units are:

E.U. ID No.	Brief Description
Regulated Emissions Units	
001	Unit 1 is a Simple-Cycle Combustion Turbine rated at 40 megawatts (MW), 367 million British thermal unit per hour (MMBtu/hr) for natural gas and 372 MMBtu/hr for No. 2 fuel oil.
002	Unit 2 is a Combined-Cycle Combustion Turbine rated at 120 MW, 869 MMBtu/hr for natural gas and 928 MMBtu/hr for No. 2 fuel oil.
003 005	Unit 3 is a Combined-Cycle Combustion Turbine (EU 003) with duct burner (EU 005) rated at 250 MW combined, 1,696 MMBtu/hr for natural gas and 1,910 MMBtu/hr for No. 2 fuel oil.
004	No.2 Distillate Fuel Oil Storage Tank (one million gallon capacity).
009	Unit 4 is a nominal 150 MW natural gas-fueled General Electric 7FA CTG equipped with evaporative inlet air cooling equipment; a supplementary-fired heat recovery steam generator (HRSG) with a nominal 600 million Btu per hour (MMBtu) duct burner (DB); a HRSG stack; and a nominal 150 MW steam turbine generator (STG).
010	Emergency fire pump diesel engine and ULSD FO storage tank.
011	Diesel electric generator for safe shutdown of Unit 4 and ULSD FO storage tank.
012	Unit 4 Cooling Tower – consisting of eight cells with eight individual exhaust fans.
Unregulated Emissions Units and Activities	
006	Cooling Tower.
007	Distillate Fuel Oil Tank No. 2 (700,000 gal. capacity).
008	Distillate Fuel Oil Tank No. 1 (300,000 gal. capacity).

These units fire natural gas as the primary fuel, with distillate fuel as backup.

Project Description

This proposed project is to modify several specific conditions of permit No. 0970043-014-AC (PSD-FL-400) for Unit 4, as detailed in Section III, below.

REGULATORY CLASSIFICATION

The facility is a major Prevention of Significant Deterioration (PSD) stationary source in accordance with Rule 62-212.400, F.A.C. Unit 4 is subject to the PSD rules including a determination of best available control technology (BACT).

The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.

The facility operates existing units subject to the Acid Rain provisions of Title IV of the Clean Air Act (CAA).

The facility operates units subject to the Standards of Performance for New Stationary Sources (NSPS) pursuant to 40 CFR Part 60. Unit 4 is subject to 40 CFR 60, Subpart KKKK – NSPS for Stationary Combustion Turbines that Commence Construction after February 18, 2005. This rule also covers DB burners that are incorporated into combined cycle projects. The emergency fire pump diesel engine and the safe shutdown diesel generator are subject to 40 CFR 60, Subpart IIII – NSPS for Stationary Compression Ignition Internal Combustion Engines.

The existing facility is a major source of hazardous air pollutants (HAP). Unit 4 is potentially subject to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines. The applicability of this rule has been stayed for lean premix and diffusion flame gas-fired combustion turbines such as installed for this project. The safe shutdown diesel generator was subject only to the initial notification requirements of 40 CFR 60, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines.

The facility is subject to the Federal Clean Air Interstate Rule (CAIR) in accordance with the Department's final rule at Section 62-296.470, F.A.C.

The facility operates units that were certified under the Florida Power Plant Siting Act (FPPSA), 403.501-518, F.S. (Unit 4 is also subject to the requirements of the FPPSA).

RELEVANT DOCUMENTS

Several documents shown in the following link are not a part of this permit, but helped form the basis for this permitting action. Documents related to this permitting action are posted under permit No. 0970043-018-AC at the following web site address: http://appprod.dep.state.fl.us/air/emission/apds/default.asp.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance (OPC) in the Division of Air Resource Management of the Department. The mailing address for OPC 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 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:
   a. Appendix A. Citation Formats and Glossary Terms;
   b. Appendix B. General Conditions; and
   c. Appendix C. Common Conditions.

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: This permit does not authorize any physical construction. The expiration date is established to provide adequate time for the concurrently processed Title V air operation permit revision to be issued as a final permit. For good cause, the permittee may request that these PSD air construction permits 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, 62-210.300(1) and 62-212.400(6)(b), F.A.C.]

This section of the permit addresses the following emissions unit.

EU ID NO.	EMISSION UNIT DESCRIPTION
009	Unit 4 is a nominal 150 MW natural gas-fueled General Electric 7FA CTG equipped with evaporative inlet air cooling equipment; a supplementary-fired heat recovery steam generator (HRSG) with a nominal 600 million Btu per hour (MMBtu) duct burner (DB); a HRSG stack; and a nominal 150 MW steam turbine generator (STG).

APPLICABLE STANDARDS AND REGULATIONS

1. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

2. Except as specified below, the facility remains subject to all of the requirements contained in all previously issued air permits for this facility. (Note: These requirements are reflected in the current Title V Air Operation Permit No. 0970043-017-AV issued on November 25, 2009 and the air construction permit No. 0970043-014-AC (PSD-FL-400) for Unit 4 issued on September 5, 2008.

PERMIT BEING MODIFIED: 0970043-014-AC (PSD-FL-400)

3. Specific Condition 7 is revised to properly reflect the nominal heat input of this Unit, as installed.

7. Capacity – CTG: The nominal heat input rating of the CTG is ~~1,860~~ 1,900 MMBtu per hour based on a compressor inlet air temperature of 59° F, International Organization for Standardization (ISO) conditions, the 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. 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(Definitions – Potential to Emit), F.A.C.]

4. Specific Condition 12 is revised to add the word "block" to the 24-hr average for NO_X, as per Condition 26 of permit (PSD-FL-400), and to rearrange the column for the average time for CO.

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

Pollutant	Method of Operation	Initial and Annual Stack Test 3-Run Average		CEMS Average
		ppmvd @15% O_2	lb/hr [f]	ppmvd @ 15% O_2
CO [a]	CTG Normal	4.1	16.7	8.0, 24-hr block 6.0, 12-month rolling
	CTG & DB	7.6	40.8	
	~~All Modes~~	~~NA~~	~~NA~~	~~6.0, 12-month rolling~~
NO_X [b]	CTG Normal	2.0	13.4	2.0, 24-hr block and 15, 30 days rolling[g]
	CTG & DB	2.0	17.6	

No change to the rest of this Condition.

5. The Department encourages operators to keep their combustion turbines properly tuned to ensure that emissions during normal operations are as low as possible, so clarifications to provisions that encourage tuning are routinely granted. Specific Conditions 18 and 19 are revised to include requested circumstances for DLN tuning.

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

19. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or ~~other similar~~ circumstances as identified by the equipment manufacturer. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 14 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.]

6. Specific Condition 22 is revised to clarify that ammonia testing is required, since the word ammonia was inadvertently omitted (by the Department) from this condition. As per condition 12 of the original PSD-FL-400 (Emission Standards) that requires initial and annual testing for all pollutants, the ammonia test requirement is added to this condition. It is the intent of the Department to require annual testing of ammonia for combined cycle combustion turbines with SCR. The test is to provide an indicator of catalyst viability and to maintain a correlation between the ammonia injection rate and actual NO_X emissions to be used as a surrogate parameter in the event the NO_X CEMS is temporarily out of service.

22. Annual Compliance Tests: During each federal fiscal year (October 1st, to September 30th), the CTG shall be tested to demonstrate compliance with the emission standard for ammonia slip and visible emissions. NO_X and CO emissions data collected during the required continuous monitor RATA may be used to demonstrate compliance with the CO and NO_x standards. 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. [Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C.]