



Florida Department of Environmental Protection

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Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

PERMITTEE

Duke Energy Florida, LLC (DEF)
Crystal River Power Plant

Authorized Representative:
Mr. Brian V. Powers, Station Manager

Permit Nos. 0170004-054-AC/PSD-FL-383G

Permit Expires: December 31, 2018

Air Construction Permit

Project: Minor Source Air Construction Permit & Revisions
Citrus County, Florida

PROJECT

This is the final air construction (AC) permit, which authorizes the shutdown of FFSG, Units 1 & 2 and revisions to previously issued AC/PSD permits (Project). This facility is an existing electric power generation facility categorized under Standard Industrial Classification No. 4911. The existing Crystal River Power Plant is in Citrus County at 15760 West Power Line Street in Crystal River, Florida. UTM coordinates are: Zone 17, 334.3 km East and 3204.5 km North. Latitude is: 28° 57' 34" North and Longitude is: 82° 42' 1" West.

This final permit is organized into the following sections: Section I (General Information), Section II (Requirements); and, Section III (Emission(s) Unit(s) Specific Conditions). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section IV 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.). This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. A copy of this permit modification shall be filed with the referenced permit and shall become part of the permit.

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

(DRAFT)

For:

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

SA/dlr/sms

PERMIT

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) 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 persons listed below.

Mr. Brian V. Powers, DEF: brian.powers@duke-energy.com

Mr. Jamie Hunter, DEF: jamie.hunter@duke-energy.com

Mr. Michael Ballenger, P.E., Trinity Consultants: mballinger@trinityconsultants.com

DEP SWD Office: SWD_Air@dep.state.fl.us and SWD_Air_Permitting@dep.state.fl.us

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EPA Region 4 NSR/PSD, NSRsubmittals@epa.gov

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.

(DRAFT)

SECTION I. GENERAL INFORMATION

FACILITY DESCRIPTION

This existing facility consists of four coal-fired fossil fuel steam generating (FFSG) units with electrostatic precipitators; two natural draft cooling towers for FFSG Units 4 and 5; helper mechanical cooling towers for FFSG Units 1 and 2; coal, fly ash, and bottom ash handling facilities; limestone and gypsum material handling activities; hydrated lime storage and transfer system for Units 4 and 5; and, various fire pumps and generators. The facility is also authorized to operate a portable concrete batch plant (EU 033), as needed for on-site maintenance. The facility continuously operates low-NO_x burners, selective catalytic reduction systems (SCR), flue gas desulfurization systems (FGD) which includes limestone and gypsum material handling activities and acid mist mitigation (AMM) systems for existing Units 4 and 5, as authorized by permits No. 0170004-023-AC (PSD-FL-383C) and 0170004-037-AC (PSD-FL-383E). In conjunction with the new control equipment, Units 4 and 5 are now also authorized to burn a blend of bituminous/sub-bituminous coal.

Also included at this facility are miscellaneous insignificant emissions units and/or activities.

This project will affect the following *existing* permitted emissions units:

E.U. ID No.	Brief Description
001	Fossil Fuel Steam Generator (FFSG), Unit 1
002	FFSG, Unit 2
003	FFSG, Unit 5
004	FFSG, Unit 4

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- This facility operates units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

PROPOSED PROJECT

This project adds several new permit conditions while also changing conditions in several previously issued AC and PSD permits. The AC permit adds several conditions dealing with the future shutdown date of FFSG Units 1 & 2. In addition, previously issued AC/PSD permits have been revised regarding FFSG Units 5 & 4. These revisions lower the SO₂ emission limit for the units from 0.27 pounds per million British thermal units (lb/MMBtu) of heat input based on a 30-day rolling average to 0.25 lb/MMBtu based on a 30-day rolling average. Compliance with the revised SO₂ emission limit shall occur on or before December 31, 2017.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Minor Source Air Construction Permit Application received on November 18, 2016 (complete).

SECTION II. REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance, Division of Air Resource Management, Florida 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 Compliance Authority. The Compliance Authority is listed on the cover page of the Title V air operation permit.
3. Appendices. The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Definitions;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions; and,
 - d. Appendix D. Common Testing Requirements.
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 & 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions. For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications. The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) & 62-212.300(1)(a), F.A.C.]
7. 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), F.A.C.]
8. Construction. **This permit authorizes the proposed project.** The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Office of Permitting and Compliance prior to the expiration of this permit. [Rules 62-210.300(1), 62-4.070(4) 62-4.080, and 62-4.210, F.A.C.]
9. Application for Title V Air Operation Permit. **The permittee shall apply for a Title V air operation permit to incorporate the new, lower SO₂ emission limit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation under the new lower limit.** To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION III. EMISSION(S) UNIT(S) SPECIFIC CONDITIONS

Subsection A. FFSG, Units 1 & 2 (Emission Units 001 & 002)

This subsection of the permit addresses the following emissions units:

E.U. ID No.	Brief Description
001	FFSG Unit 1
002	FFSG Unit 2

This subsection of the permit is for authorizing the shutdown of FFSG, Units 1 & 2.

PREVIOUS APPLICABLE REQUIREMENTS

1. Effect on Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.]

SHUTDOWN

2. Shutdown: Unless otherwise specified by the Department in writing, these emission units shall retire by December 31, 2018 and shall no longer operate after this date or in accordance with the date as specified in Condition 8., Section 2. Administrative Requirements of Permit No. 0170004-047-AC, whichever occurs first. [Applicant Request; Application No. 0170004-054-AC; and, Rules 62-4.160(2) & 62-210.200, *Definitions - Potential to Emit (PTE)*, F.A.C.]

{Permitting note: The December 31, 2018 retirement date may be temporarily extended if the permittee and the Department in writing agree that a situation beyond the control of the permittee has occurred and the permittee can demonstrate that temporary continued operation of these units is necessary to maintain electric system reliability.}

REPORTING REQUIREMENTS

3. Reporting: The permittee shall notify the permitting and compliance authorities of the actual shutdown dates of the units. [Applicant Request; and, Application No. 0170004-054-AC.]

SECTION III. EMISSION(S) UNIT(S) SPECIFIC CONDITIONS

Subsection B. FFSG, Units 5 & 4 (Emission Units 003 & 004)

This subsection of the permit addresses the following emissions units:

E.U. ID No.	Brief Description
003	FFSG, Unit 5
004	FFSG, Unit 4

This subsection of the permit addresses revisions to the SO₂ emission limit that applies to FFSG, Units 5 & 4.

The revisions lower the SO₂ emission limit from 0.27 lb/MMBtu of heat input based on a 30-day rolling average to 0.25 lb/MMBtu of heat input based on a 30-day rolling average. Compliance with the revised SO₂ emission limit shall occur on or before December 31, 2017.

Permits Being Modified:	Permit No. 0170004-037-AC/PSD-FL-383F was the latest compilation of the permit revisions which revised and replaced Permit No. 0170004-026-AC/PSD-FL-383D. {Note: Permit No. 0170004-016-AC/PSD-FL-383 was the original permit and Permit No. 0170004-023-AC/PSD-FL-383C was a revision to the original permit.}
Affected Emission Units:	FFSG Units 5 & 4 (E.U. ID Nos. 003 & 004)

The affected specific condition as cited below is hereby changed as follows (the remainder of the permit remains unchanged as a result of this permitting action):

Specific Condition 3.A.9.b.

Specific Condition 3.A.9.b. is changed as follows:

{For simplified reading, the important revisions are emphasized with yellow highlight in this electronic document. Strikethrough is used to denote the deletion of text and double-underlines are used to denote the addition of text.}

9. Standards Based on CEMS: Including the emissions from the CBO unit, emissions from Units 4 and 5 each shall not exceed the following standards based on data collected by the CEMS.

a. ...

b. *SO₂ Emissions*: As determined by CEMS data, SO₂ emissions shall not exceed 0.27 lb/MMBtu of heat input on or before December 31, 2017 and 0.25 lb/MMBtu of heat input after December 31, 2017 based on a 30-day rolling average for all periods of operation including startup, shutdown and malfunction. As determined by CEMS data, SO₂ emissions shall not exceed 1944.0 lb/hour per unit based on a 24-hour block average excluding startup, shutdown and malfunction of the FGD system. [Application Nos. 0170004-016-AC & 0170004-054-AC/PSD-FL-383G; Rules 62-4.070(3), 62-4.080 and 62-212.400(12), F.A.C.]

{Permitting notes: Compliance with the revised SO₂ emission standard of 0.25 lb/MMBtu of heat input based on a 30-day rolling average for all period of operation including startup, shutdown, and malfunction shall occur after December 31, 2017. In addition, the more stringent SO₂ emission limit assures compliance with the less stringent, yet applicable SO₂ emission standard from NSPS 40 CFR 60, Subpart D.}

...

The following are new conditions being added specifically for this part of the project, i.e., lowering of the SO₂ emission limit.

No new or modified equipment (physical changes) or changes in methods of operation associated with this part of the project (SO₂ emission limit reduction) are authorized under this permit.

PREVIOUS APPLICABLE REQUIREMENTS

SECTION III. EMISSION(S) UNIT(S) SPECIFIC CONDITIONS

Subsection B. FFSG, Units 5 & 4 (Emission Units 003 & 004)

1. Effect on Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.]

TESTING REQUIREMENTS

2. Initial Compliance Tests: These emission units shall use the previously certified SO₂ CEMS data to demonstrate initial compliance with the new SO₂ emission limit of 0.25 lb/MMBtu. The initial compliance tests shall consist of the initial 30-day rolling average using SO₂ CEMS data collected during the first 30 boiler operating days following December 31, 2017. [Rules 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.; and, Application No. 0170004-054-AC/PSD-FL-383G.]

REPORTING REQUIREMENTS

3. Test Reports: The permittee shall prepare and submit a report summarizing the results of the initial compliance demonstration. The report shall be submitted no later than 45 days following the conclusion of the demonstration period. Reports shall be prepared in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(10), F.A.C.; and, Application No. 0170004-054-AC/PSD-FL-383G.]