Florida Power Corporation dba Progress Energy Florida, Inc.
University of Florida Cogeneration Plant
Title V Air Operation Permit Revision
Permit No. 0010001-013-AV

APPLICANT

The applicant for this project is Florida Power Corporation dba Progress Energy Florida, Inc. The applicant's responsible official and mailing address are: Mr. Wilson Hicks, Plant Manager, Florida Power Corporation dba Progress Energy Florida, Inc., University of Florida Cogeneration Plant, P.O. Box 112295, Gainesville, Florida 32611-2295.

FACILITY DESCRIPTION

The applicant operates the University of Florida Cogeneration Plant, which is located in Alachua County on Mowry Road at Building 82, University of Florida, Gainesville, Florida.

The existing facility consists of one nominal 48 megawatt (MW) combustion turbine (CT), one duct burner (DB) with a heat recovery steam generator, and two steam boilers. Emissions from the CT and DB are vented through a common stack. Nitrogen Oxide (NO_X) emissions are controlled with water/steam injection. The steam boilers, each having a separate exhaust stack, are used only as back-up sources. Compliance is demonstrated with a NO_X Continuous Emissions Monitoring System (CEMS). The facility is subject to 40 Code of Federal Regulations (CFR) Part 60, New Source Performance Standards, Subparts A (General Provisions), Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units), and GG (Standards of Performance for Stationary Gas Turbines). This facility is not a major source of hazardous air pollutants.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to incorporate the revised conditions of Air Construction permit No. 0010001-011-AC/PSD-FL-181B into the current Title V Operating permit.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for Title V Air Operation Permit Revision received June 1, 2012.
Application deemed completed on June 1, 2012.
Draft/proposed permit issued on August 29, 2012.
Revised Draft/proposed permit issued on September 13, 2012.
Public Notice Published on September 21, 2012.

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does not operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility.

GHG: The facility is identified as a major source of green house gas (GHG) pollutants.

PROJECT REVIEW

Air Construction permit No. 0010001-011-AC/PSD-FL-181B, effective November 10, 2011, was issued to clean up old and conflicting conditions in prior air construction permits for this facility. It specifically replaced all of the previous air construction and prevention of significant deterioration (PSD) permits issued for the emissions units that comprise this facility. The purpose of this permitting project is to replace the applicable requirements that were based on the previous air construction and PSD permits with the applicable requirements established in permit No. 0010001-011-AC/PSD-FL-181B. All of the changes made in response to the replaced air construction permit are detailed in draft Title V air operation permit No. 0010001-013-AV. Added text is shown in double underline format, while deleted text is shown in ~~strike through~~ format. All changes within the draft permit are further highlighted in yellow for ease of location.

A summary of the changes that were made in the Title V air operation permit, based on the changes made in air construction permit No. 0010001-011-AC/PSD-FL-181B, are shown below:

- Reset CO BACT emission limit for Combustion Turbine in Section III, Subsection B (all applicable Specific Conditions).
- Update facility-wide NO_X limit from 194.3 TPY to 185.3 TPY in Section II, Specific Condition F.W.10.; Section III, Specific Conditions A.4., A.18., B.10. and B.30.
- Remove distillate oil as an authorized fuel for the Combustion Turbine in Section III, Subsection B (all applicable Specific Conditions).
- Remove CO from the reporting of excess emissions in Section III, Specific Condition B.16.
- Revise the visible emissions standard for the Backup Steam Boilers in Section III, Specific Condition A.5.
- Update the allowable sulfur content for natural gas firing to 2 grains of sulfur per 100 standard cubic feet of gas for the combustion turbine, the duct burner, and the backup steam boilers in Section III, Specific Conditions B.7., B.13.(a) and B.13.(b).
- Remove compliance plan for No. 2 distillate fuel oil firing in Section III, Specific Condition B.36.

In addition, because this facility operates stationary reciprocating internal combustion engines which are subject to regulation under 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, that were exempted from regulation at the time of the last Title V air operation permit renewal, Appendices 40 CFR 63, Subpart A and 40 CFR 63, Subpart ZZZZ, have been administratively added to the Appendix Section as applicable requirements. Detailed specific conditions will be established (as applicable) within the body of the permit for these regulated emissions units at the time of the next renewal.

CONCLUSION

This project revises Title V air operation permit No. 0010001-009-AV, which was effective on January 1, 2010. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210, 62-213 and 62-214, F.A.C.