Title V Air Operation Permit Renewal
Permit No. 1070014-008-AV
Florida Power and Light Company, Putnam Power Plant
Putnam County, Florida

APPLICANT

The applicant for this project is Florida Power and Light (FP&L) Company. The applicant's responsible official and mailing address are: Mr. Ken Nusche, Plant General Manager, Florida Power and Light Company, Putnam Power Plant, 392 U.S. Highway 17 South, East Palatka, Florida 32131.

FACILITY DESCRIPTION

The applicant operates the existing Putnam Power Plant, which is located at 392 U.S. Highway 17 South, East Palatka, Florida.

On October 16, 1974, the Department issued a Site Certification (PA 74-01) authorizing the construction and operation of the FP&L Putnam Plant. On July 20, 1999, a construction permit (1070014-003-AC) was issued for the installation of inlet foggers at the four (4) combined cycle combustion turbines (CCCT). This permit adopted and amended the Conditions of Certification and established a federally enforceable permit as per the State Implementation Plan (SIP) requirements. No PSD permit exists for this facility since it was built before 1975 and subsequent modifications have not triggered PSD review.

The existing facility consists of four combustion turbines, each with an associated inlet fogger and heat recovery steam generator (HRSG) equipped with duct burners, an auxiliary boiler, emergency engines, and unregulated emissions units. Each combustion turbine is a Westinghouse unit rated at 70 megawatt (MW) generating capacity (at 85 degrees Fahrenheit (F) ambient temperature), with a maximum heat input for natural gas and fuel oil of 968.3 million British thermal units per hour (MMBtu/hr) and 910.6 MMBtu/hr, respectively. The duct burners for each HRSG are rated at a maximum heat input of 250 MMBtu/hr, and are fired with natural gas and number 2 fuel oil. The auxiliary boiler is manufactured by VA-Power and has a maximum heat input for natural gas and number 2 fuel oil of 16.275 MMBtu/hr and 14.28 MMBtu/hr, respectively.

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

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is 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 operates units subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 Code of Federal Regulations (CFR) 63.

Siting: Units 003 through 011 were originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C. (PPSC PA 74-01).

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility because there are no add-on pollution control devices installed.

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

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

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit for the above referenced facility.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

These documents and all related correspondence are on file with the permitting authority:

DEP Objection Resolution Letter to US EPA Region 4 dated March 10, 1998.
Initial Title V Permit 1070014-001-AV. Effective date January 1, 1999.
Title V Permit Renewal 1070014-005-AV. Effective date January 1, 2004.
Title V Permit Renewal 1070014-006-AV. Effective date January 1, 2009.
Title V Permit Renewal 1070014-008-AV. Effective January 1, 2014.

PROJECT REVIEW

The following changes/revisions were made as part of this renewal:

1. To restore the renewed permit to the conditions established in an EPA objection resolution letter dated March 10, 1998, the Department is clarifying that the heat input limitations have been placed in this permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. A note below the permitted capacity condition clarifies this. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emission testing is required to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test. It should be noted that the permitting note placed into this permit is unique to a specific EPA objection resolution related to this facility and does not establish a precedent for any other facility.

2. Creation of new emissions unit numbers 014 and 015 and new Subsections III.D and III.E, to accommodate the applicable requirements for new emergency engines regulated pursuant to 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ. These two new emissions units and subsections were created to reflect the applicable federal reciprocating internal combustion engine (RICE) requirements for engines that have been replaced since the last issuance of the permit. These emergency engines met the categorically exempt level of 64,000 gallons per year of diesel fuel pursuant to Rule 62-210.300(3)(a)35.d., F.A.C., so air construction permits were not required. The engines that were replaced were previously included in the permit as parts of Unregulated emissions unit number 012.

3. Deleting the Common Conditions Subsection D and incorporating these conditions in the body of each emission unit subsection as applicable.

4. Deleting references to SIP Excess Emissions Rules 62-210.700(1), 62-210.700(2), and/or 62-210.700(4) F.A.C., that were incorrectly placed in the previous Title V permit (006-AV) for units subject to NSPS requirements Subpart Db (E.U 007-010) and Subpart Dc (E.U. 011). This current Title V permit includes the applicable State Excess Emissions regulations only for the Turbines (E.U. 003-006) that are not subject to NSPS requirements.

5. Deleting references to DEP Method 9 since these units shall be tested in accordance with EPA Method 9.

6. Replacement of Appendix TV, Title V General Conditions, Appendix TR, Facility-wide Testing Requirements and Appendix RR, Facility-wide Reporting Requirements with the newest versions;

7. Consolidation of Tables 1 and 2 into the Appendix section and updates;

8. Incorporation of Table H, Permit History into the Appendix section.

9. Deleting the references to Appendix ASP, ASP Number 97-B-01 (With Scrivener's Order Dated July 9, 1997) since this ASP is applicable to fossil fuel steam generators which have a heat input of more than 250 MMBTU/hour and subject to Rule 62-296.405, F.A.C. The duct burners have a maximum heat input for natural gas or No. 2 fuel oil of 250 MMBtu/hr; and, the auxiliary boiler has a maximum heat input of 16.275 MMBtu/hr (natural gas) and 14.28 MMBtu/hr (No.2 fuel oil). These units are subject to NSPS requirements; the auxiliary boiler is also subject to NESHAP requirements.
10. Identification of portable non-road engines, contractor maintenance equipment, and miscellaneous insignificant activities in Appendix I – List of Insignificant Emissions Units and/or Activities (refer to new items 9 and 10). Some of these activities were previously addressed as part of Unregulated EU 012 (this unit number will be inactivated in the Department's database system).
11. Updated Appendix I – List of Insignificant Emissions Units and/or Activities.
12. Updated Appendix U – List of Unregulated Emissions Units and/or Activities.

CONCLUSION

This project renews Title V air operation permit No. 1070014-006-AV, which was effective on January 1, 2008. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.