Florida Power and Light Company
Port Everglades Plant

Permit No. 0110036-011-AV, Title V Air Operation Permit Renewal

APPLICANT

The applicant for this project is the Florida Power and Light Company. The applicant's responsible official and mailing address are: Mr. Rodolfo Sanchez, Plant General Manager, Port Everglades Plant, P.O. Box 13118, Fort Lauderdale, Florida 33316.

FACILITY DESCRIPTION

The Port Everglades Plant is located in Broward County at 8100 Eisenhower Boulevard, Fort Lauderdale, Florida.

This existing facility consists of twelve simple cycle combustion turbines. The four fossil fuel steam generators have been shutdown and plans are to replace them with a 3 on 1 combined cycle plant in 2016. Also included in this permit are miscellaneous insignificant emissions units and/or activities.

PROJECT DESCRIPTION

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

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Applicant (FP&L) Agreement with U.S. EPA on March 3, 1998.

The following documents are specifically related to the NOx emissions testing frequency for the simple cycle combustion turbines:
Title V Air Operation Permit Revision, Permit No. 0110036-003-AV issued on April 25, 2001.
Applicant (FP&L) Request Letter dated September 19, 2000.
Air Operation Permits AO06-230618 (issued in 1993); and, AO06-148762.

Application for a Title V Air Operation Permit Renewal received on May 7, 2013 via Electronic Permit Submittal and Processing System (EPSAP) {complete application}.
Clean Air Interstate Rule (CAIR) Part Forms received on May 16, 2013.

Draft/Proposed Title V Air Operation Permit Renewal posted onto web site on Month day, 2013.
Public Notice published on Month day, 2013.
Notification to U.S. EPA Region 4 of Publication of Public Notice on Month day, 2013.

PRIMARY REGULATORY REQUIREMENTS

Title I - HAP: The existing facility is a major source of hazardous air pollutants (HAP), based on the Title V air operation permit renewal application.

NESHAP: This facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 Code of Federal Regulations (CFR) 63.

Since the facility is a major source of HAP, the NESHAP (MACT) - 40 CFR 63, Subpart YYYY, Stationary Combustion Turbines, could apply to the simple cycle combustion turbines. However, the simple cycle combustion turbines are 'existing' units, e.g., constructed before January 14, 2003. Pursuant to 40 CFR

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63.6090(b)(4) 'existing' units do not have to meet the requirements of 40 CFR 63, Subpart YYYY and the requirements of 40 CFR 63, Subpart A including the initial notification requirement.

Title IV: This facility does operate units subject to the acid rain provisions of the Clean Air Act.

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

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

NSPS: This facility does not operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

CAIR: This facility does operate units subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

Siting: The existing facility does not operate units subject to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: The emissions units at this facility are not subject to CAM for one or more of the following reasons: they do not trigger the potential pre-air pollution control device major source emission thresholds; they demonstrate continuous compliance with a continuous emission monitoring system (CEMS); they are not equipped with air pollution control device(s); they are equipped with device(s) which are considered to be inherent to the process/operation; or, they satisfy CAM by meeting the post-1990 federal monitoring requirements for the same or similar air pollutants.

GHG: The existing facility is not identified as a major source of green house gas (GHG) pollutants.

PROJECT REVIEW

Changes were made in this renewed Title V air operation permit.

Permit

- Title V Annual Emissions Fee Changes. Section 403.0872, Florida Statutes (F.S.) was amended by House Bill (HB) 999, effective July 1, 2013. Two very important changes were made in the amendment which apply to the Title V annual emissions fee: 1) the Title V annual emissions fee is required to be calculated based upon actual emissions rather than allowable emissions, as in the past twenty years; and, 2) the due date for submitting the Title V annual emissions fee was changed from March 1st to April 1st. See Facility-wide Condition FW7. in Section II. of the permit for the specific requirements.
- Fossil Fuel Steam Generators, Units 1-4. The four fossil fuel steam generators have been shutdown. Fossil fuel steam generator Units 1 & 2, Emissions Unit Identification Numbers (E.U. ID Nos.), 001 & 002) were permanently retired on November 30, 2012 and Units 3 & 4 (E.U. ID Nos. 003 & 004) were permanently retired on January 31, 2013. The subsections for these four boilers were removed in this renewed air operation permit. The applicable Acid Rain and CAIR retired unit exemption forms are included in Subsection V. of this renewed permit.
- Simple Cycle Combustion Turbines, GT 1 - GT 12. NOx & VE emission testing is scheduled to be completed by September 30, 2013 to satisfy the 5-year testing requirement of Specific Condition C.13. from Permit No. 0110036-007-AV.

  These simple cycle combustion turbines (CTs) are state implementation plan (SIP) emissions units, i.e., not regulated under the NSPS 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. There is no specific visible emission (VE) standard for these simple cycle CTs contained in Chapter 62-296, *Stationary Sources - Emission Standards*, F.A.C. These simple cycle CTs are subject to the state's general VE standard of 20% opacity at Rule 62-296.320(4)(b)1., F.A.C.

  These simple cycle CTs are substantially similar.

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Previously issued Department permits, AO06-148762 & AO06-230618 (issued in 1993 & expired in 1998, see specific condition 3.), authorized NOx testing frequency to be based on NOx emission test results. These permits were issued under the NOx RACT.

The applicant requested a 5-year testing frequency for NOx emissions for the Port Everglades simple cycle CTs consistent with the 5-year testing frequency established for the sister units at the Lauderdale Plant (1997 request granted) by the letter dated September 19, 2000. The request was granted for the Port Everglades simple cycle CTs by Permit No. 0110036-003-AV issued on April 25, 2001.

The units' most recent 5-years of operating hours were: 470 hours in 2012; 1,541 hours in 2011; 1,125 hours in 2010; 106 hours in 2009; and, 151 hours in 2008. These units are therefore infrequently used.

The last VE test results (2008) were 0.0% opacity. The last NOx test results (2008) were 0.386 lb/MMBtu while firing natural gas, which is about 23% below the standard.

Due to the continued low operating hours of these units, their infrequent use, low test results and consistent with previously issued permits, a minimum 5-year testing frequency is specified for NOx and VE emissions.

In conclusion, Florida's SIP testing frequency rule [Rule 62-297.310(7)(a)4., *Frequency of Compliance Tests*, F.A.C.] was applied in this renewed air operation permit consistent with how it had been applied and in effect for at least the past 15 years or more in air operation permits for the Port Everglades simple cycle CTs.

- Appendix I, List of Insignificant Emissions Units and/or Activities. Included the applicant's requested miscellaneous changes to the list of insignificant emissions units and/or activities.

- Appendix U, Unregulated Emissions Units and/or Activities.

  The "E.U. ID No. 018, Miscellaneous internal combustion engines and portable equipment" listed in Appendix U is inactivated since the engines are now classified elsewhere.

  The "Four (4) Small Hurricane Shelter Generators; Propane fired emergency generators manufactured by Generac (Model 4725) or by Mitsubishi. Each generator (engine) is rated at 25 KW (18.64 brake HP) with a displacement of < 10 liters/cylinder, manufactured in June 2006" are included in this renewed permit. These are assigned their own new individual E.U. ID No. 031 since they are classified as being 'unregulated.'

CONCLUSION

This project renews Title V air operation permit No. 0110036-007-AV, which was effective January 1, 2009.

Port Everglades Plant

http://www.dep.state.fl.us/air/emission/construction/port_everglades/Draft%200110036-010-AC%20-%20TEPD.PDF

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