Title V Air Operation Permit Renewal
Permit No. 1010373-013-AV

APPLICANT

The applicant for this project is the Shady Hills Power Company, LLC. The applicant's responsible official and mailing address are: Mr. Roy S. Belden, Vice President, Shady Hills Power Company, LLC, 800 Long Ridge Road, Stamford, Connecticut 06927.

FACILITY DESCRIPTION

The applicant operates the existing Shady Hills Generating Station, which is located in Pasco County at 14240 Merchant Energy Way, Shady Hills, Florida. This facility consists of the following equipment: three, dual-fuel, nominal 170-megawatt (MW) General Electric Frame 7FA combustion turbine-electrical generators (Model PG 7241FA); one 2.8-million gallon distillate oil storage tank; and a natural gas fuel heater. The combustion turbines operate in simple-cycle peaking and intermittent-duty modes and are authorized to fire natural gas and distillate oil. To reduce emissions of nitrogen oxides (NOx), the combustion turbines are equipped with dry low-NOx combustors for gas firing and water injection for oil firing. Compliance with the NOx emission standard is demonstrated with a continuous emissions monitoring system. To improve overall efficiency, the natural gas fuel heater preheats the natural gas before combustion in the combustion turbines. Also included in this permit are miscellaneous insignificant and unregulated emissions units and activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to revise/renew the existing Title V permit for the above referenced facility. The revisions are related to incorporating the changes made in concurrent Project No. 1010373-014-AC regarding: heat input rates, NOx data exclusion, CEMS requirements, and identifying the fuel heater as a regulated emissions unit.

PREVIOUS PERMITS

- Air Construction Permit No. 1010373-001-AC/PSD-FL-280, issued on January 13, 2000 (initial construction of existing three combustion turbines)
- Construction Permit No. 1010373-002-AC, issued on October 19, 2000 (transfer of ownership/name change)
- Title V Permit, 1010373-003-AV**,** issued on November 14, 2002 (initial operation permit)
- Title V Permit No. 1010373-004-AV, issued on December 30, 2003 (operation permit revision)
- Title V Permit No. 1010373-005-AV, issued on April 10, 2007 (operation permit revision)
- Title V Permit No. 1010373-006-AV, issued on December 20, 2007 (operation permit renewal)
- Construction Permit No. 1010373-007-AC/PSD-FL-402, issued on January 12, 2009 (construction permit to add two new combustion turbines)
- Title V Permit No. 1010373-008-AV, issued on February 17, 2009 (operation permit revision)
- Construction Permit No. 1010373-009-AC/PSD-FL-280A, issued on November 13, 2008 (construction permit modification to increase maximum heat input rates for existing combustion turbines, triggered the NSPS Subpart KKKK provisions)
- Title V Permit No. 1010373-010-AV, issued on January 9, 2009 (operation permit revision)
- Construction Permit No. 1010373-011-AC (withdrawn)
- Construction Permit No. 1010373-012-AC/PSD-FL-402A, issued on April 6, 2012 (construction permit modification to change models of two new combustion turbines and increase the maximum heat input rates; a separate application is currently pending with EPA Region 4 regarding a separate PSD permit for greenhouse gases)
- Title V Permit No. 1010373-013-AV, (operation permit renewal - project under review)

- Construction Permit No. 1010373-014-AC/PSD-FL-280B, (construction permit modification, under concurrent review with Project 1010373-013-AV)

PRIMARY REGULATORY REQUIREMENTS

The existing facility is an electrical generating plant with a Standard Industrial Classification (SIC) Code of 4911. The following identifies the primary regulatory classifications.

- The facility is not identified as a major source of hazardous air pollutants (HAP).
- The 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 62-213, Florida Administrative Code (F.A.C.).
- The facility is a major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates units subject to the New Source Performance Standards (NSPS) in Part 60, Title 40 of the Code of Federal Regulations (CFR).
- The facility is subject to the Clean Air Interstate Rule (CAIR) specified in Rule 62-296.470, F.A.C.
- Since compliance with the NOx emission standard is demonstrated with a continuous emissions monitoring system, a Compliance Assurance Monitoring (CAM) plan is not required.
- The applicant identified the existing facility as an EPA-major source of greenhouse gas (GHG) pollutants. Florida does not regulate GHG emissions.

PROJECT REVIEW

The primary purpose of this project is to renew Title V air operation Permit No. 1010373-010-AV and incorporate the concurrent changes being made to the underlying air construction permit for the existing combustion turbines. The Department recently issued Permit No. 1010373-012-AC (PSD-FL-402A) to expand the Shady Hills Generating Station by constructing two new combustion turbines. Although construction on these units has not yet begun, the applicant requests a revision of Permit No. 1010373-009-AC/PSD-FL-280A for the existing units to be consistent with the following provisions of the new permit:

1. Move the maximum heat input rates in the specific conditions to the emissions unit descriptions as a design heat input rate.
2. Identify the NOx data exclusion procedures for compliance with the emission standards based on the Best Available Control Technology established in accordance with the procedures prescribed by the State Implementation Plan (SIP).
3. Include specific CEMS requirements for determining compliance with the NOx emission standard.
4. Identify the natural gas fuel heater as a regulated unit.

The modified permit also includes changes to clarify the emissions standards and monitoring requirements for sulfur dioxide and particulate matter. For specific details regarding these changes, see the Technical Evaluation and Preliminary Determination for Project No. 1010373-014-AC. In addition, the Title V renewal permit uses the term “distillate oil” throughout instead of fuel oil or No. 2 fuel oil.

CONCLUSION

This project renews Title V air operation Permit No. 1010373-010-AV and incorporates the changes made in concurrent air construction Permit No. 1010373-014-ACPSD-FL-280B. 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, 62-213, and 62-214, F.A.C.