STATEMENT OF BASIS

City of Tallahassee
Arvah B. Hopkins Generating Station
Facility ID No. 0730003
Leon County
Title V Air Operation Permit Revision
Permit No. 0730003-014-AV

APPLICANT

The applicant for this project is the City of Tallahassee. The applicant's responsible official and mailing address are: Triveni Singh, Production Manager, City of Tallahassee, Hopkins Generating Station, 2602 Jackson Bluff Road, Tallahassee, Florida 32304.

FACILITY DESCRIPTION

The applicant operates the existing Hopkins Generating Station, which is located in Leon County at 1125 Geddie Road, in Tallahassee, Florida.

This facility consists of Unit 1, a fossil fuel-fired steam generator, two older fossil fuel-fired combustion turbine peaking units (CT-1 and CT-2), and two New Source Performance Standard (NSPS) regulated simple cycle, inlet-chilled combustion turbines(HC3 and HC4) and a NSPS regulated combined cycle combustion turbine rated at approximately 300 MW in combined cycle (Unit 2A). Boiler Number 2 was retired in 2008 and was originally regulated under the Florida Electrical Power Plant Siting Act. A spray paint booth was removed and painting at the facility is mainly consist of architecture coating of buildings and storage tanks. The fuels used at this facility are natural gas, fuel oil and on-specification used oil. This facility also includes reciprocating internal combustion engines (RICE) and miscellaneous unregulated/insignificant emissions units and/or activities.

Details of the emissions units follow below.

Emissions unit number -EU001 (Unit 1) is a Foster-Wheeler Corporation fossil fuel fired steam generator (model number SF-5) designated as "Boiler Number 1". It is rated at 903 million British thermal units (MMBtu) per hour when firing natural gas or fuel oil, 75 MW and 750,000 pounds of steam per hour.

Emissions unit No. CT-1 is a combustion turbine manufactured by Westinghouse (model number W191G). It is rated at 228 MMBtu/hour while being fueled by natural gas and/or No. 2 fuel oil with a maximum fuel oil sulfur content of 0.4%, by weight. Emissions unit CT-2 is a combustion turbine manufactured by Westinghouse (model number W251G). It is rated at 446 MMBtu/hour heat input while being fueled by natural gas and/or No. 2 fuel oil with a maximum fuel oil sulfur content of 0.4%, by weight. CT-1 drives a nominal 16.47 MW generator and CT-2 drives a nominal 26.8 MW generator. The combustion turbines do not have additional controls.

Emissions unit Nos. EU031 and -EU032 (also called HC3 and HC4) are General Electric LM 6000 Sprint simple cycle, inlet-chilled combustion turbine-electric generators. The gas turbines are capable of producing approximately 100 MW (50 MW each). The turbines are permitted to fire natural gas and 0.05% sulfur oil. The units are equipped with selective catalytic reduction (SCR) systems for the reduction of nitrogen oxides (NO_X) emissions and oxidation catalysts for the reduction of carbon monoxide (CO) and volatile organic compounds (VOC). The initial startup date for these units was July 31, 2005.

Emissions unit No. EU033 (also called Unit 2A) consists of a General Electric 7FA combustion turbine-electric generator, an automated combustion turbine control system, a heat recovery steam generator (HRSG), a gas-fired duct burner system, a HRSG stack, a bypass stack, and CO and NO_X continuous emissions monitoring system (CEMS). The combustion turbine produces approximately 188 MW. The HRSG generates steam that drives the generator previously used by the retired Unit 2 steam turbine-electrical generator to produce approximately 238 MW (at 59° F) and 272 MW at 25° F. In the combustion turbine, natural gas is fired as the primary fuel and distillate oil is fired as a restricted alternative fuel from on site storage tanks. Based on the higher heating value of each fuel and a compressor inlet temperature of 25° F, the design maximum heat input rates are 1,899 MMBtu

per hour for gas firing and 2,079 MMBtu per hour for oil firing. Natural gas is the sole fuel for the duct burner system rated at a maximum heat input rate of 765 MMBtu per hour. Initial startup of the unit occurred on May 2, 2008.

Based on the Title V permit revision application received on May 21, 2012, this facility is a major source of hazardous air pollutants (HAP).

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

Application for a Title V Air Operation Permit Renewal received May 21, 2012
Additional Information Request dated June 20, 2012
Additional Information Response received August 28, 2012

PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 4911 – Electrical Generation.

Title I, Clean Air Act (CAA): 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 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.

Siting: Unit 2 was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to the units at this facility because there are no emissions limited emissions units using add-on control devices that do not have continuous emissions monitors used for continuous compliance determination.

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

PROJECT REVIEW

The purpose of this project is to renew the Title V air operation permit for the City of Tallahassee Arvah B. Hopkins Generating Station. Changes that were made as part of this renewal include: reformatting the permit to match the current permitting style; replacement of Appendix TV-6 with the following new appendices: Appendix TV, Title V General Conditions, Appendix TR, Facility-wide Testing Requirements and Appendix RR, Facility-wide Reporting Requirements; elimination of the common conditions section; streamlining of the emissions unit sub-sections by moving common conditions to the new appendices; and, creating new sections for reciprocating internal combustion engines (RICE).

CONCLUSION

This project renews Title V air operation permit No. 0730003-011-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, 62-213 and 214, F.A.C.