Hardee Power Partners Limited – Hardee Power Station
Title V Air Operation Permit Renewal
Permit No. 0490015-017-AV

APPLICANT

The applicant for this project is Hardee Power Partners Limited. The applicant's responsible official and mailing address is: Ralph E. Randall, Regional Plant Director, Hardee Power Partners Limited, Hardee Power Station, 6695 North County Road 663, Bowling Green, Florida 33834-6817.

FACILITY DESCRIPTION

The applicant operates the existing Hardee Power Station, which is located in Hardee County at 6695 North County Road 663, Bowling Green, Florida.

The existing facility is a nominal 370 megawatt (MW) electric power plant. It consists of four 75 MW combustion turbine-electric generators, designated as Units CT-1A, CT-1B, CT2-A and CT2-B, that use natural gas and distillate fuel oil as a restricted auxiliary fuel. Hot turbine exhaust gases from CT1-A and CT1-B pass through respective unfired heat recovery steam generators (HRSGs) prior to exhausting through separate stacks. The steam from the two HRSGs is used to power a single nominal 70 MW steam turbine-electric generator. Units CT2-A and CT2-B operate in simple cycle mode (i.e. without further heat recovery). The plant includes a 4.4 million gallon storage tank (EU-004) for distillate oil and a reciprocating internal combustion engine (RICE)-driven emergency fire pump, as well as other miscellaneous unregulated and insignificant activities.

Nitrogen oxides (NO_X) emissions from Units CT-1A, CT-1B and CT2-A are controlled by water injection into the combustors when burning natural gas or distillate fuel oil. Unit CT-2B utilizes dry low-NO_X (DLN) combustors to minimize the formation of NO_X emissions when firing natural gas and water injection when firing distillate fuel oil. NO_X emissions are monitored and recorded by a continuous emissions monitoring system (CEMS).

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

Application for a Title V Air Operation Permit Renewal received May 19, 2014.

Request for Additional Information sent July 16, 2014.

Additional Information Response received September 15, 2014.

Draft/Proposed Title V Air Operation Permit Renewal issued September 22, 2014.

Public Notice of Intent to Issue Air Permits published September 25, 2014.

Minor comments received from applicant October 23, 2014.

Final permit issued November 12, 2014 and effective January 1, 2015.

PRIMARY REGULATORY REQUIREMENTS

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

North American Industry Classification System (NAICS): 221112 - Fossil Fuel Electric Power Generation.

Title I, Section 111, NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60, Subpart GG (Stationary Gas Turbines).

Title I, Section 112, NESHAP: The facility is a major source of hazardous air pollutants (HAP). The facility operates equipment (a 208 horsepower fire pump engine) that is subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63, Subpart ZZZZ.

HAP: The facility is 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 Major Stationary Source with respect to the provisions for Prevention of Significant Deterioration (PSD) contained in Rule 62-212.400, F.A.C.

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

Siting: Emissions Unit 005 (CT2B) was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C. in Conditions of Certification No. PA89-25.

CAM: The facility operates units subject to the Compliance Assurance Monitoring (CAM) plan requirements in 40 CFR 64. CAM applies to combustion turbines CT-1A, CT-1B and CT-2A to identify proper operation of the water injection systems used to reduce NO_X emissions. A CAM plan is not required for combustion turbine CT-2B since the unit is equipped with a CEMS to determine continuous compliance with the NO_X standards.

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

PROJECT REVIEW

As part of this permit renewal, minor administrative changes have been made as describe below. Where helpful, the changed conditions were highlighted in yellow for ease of location throughout the draft/proposed version of permit. The yellow highlights were removed from the final version of the renewed permit.

1. Hyperlinks have been inserted into the permit and appendix documents to aid in navigation.
2. The rule citations in the Specific Conditions have been updated, as necessary, to reflect the most current applicable requirements.
3. A new regulated emissions unit (EU 006) has been added to the permit to include applicable federal requirements for the emergency fire pump.
4. The previous Facility-wide conditions FW6 and FW7 were replaced by a new condition FW6 to reflect the recent regulatory changes that combined the Annual Operating Report and the Annual Title V Fee submissions requirements. The remainder of the facility-wide conditions were renumbered as appropriate.
5. Facility-wide condition FW8.a. (old FW9.a.) was revised to reflect the current contact information for the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
6. Deleted previous Specific Condition A.22. referencing Appendix CR, Common Requirements. Also removed Appendix CR, Common Requirements from the attached appendices, as it is redundant with the new standard Title V appendices.
7. Added Specific Conditions B.6. – B.9. and B.17. to more clearly reflect the requirements of the underlying construction permits.
8. Specific Condition B.22. (previous B.16.), Tests Prior to Permit Renewal, was revised to reflect the current rule that allows tests which are required prior to renewal (rather than annually) to be performed at any time during the five-year duration of the permit rather than in the fiscal year prior to renewal. The requirement established in Permit No. 0490015-002-AC/PSD-FL-140A to test for VOC emissions in the fiscal year prior to permit renewal was deemed to be obsolete and has been revised by this Title V air operation permit pursuant to the provisions of subparagraph 62-210.300(1)(b)1., F.A.C.
9. Specific Condition B.23. (previous B.17.), Tests after Substantial Modifications, was revised to include the "initial" tests that must be repeated following changes to the CT. A permitting note was also added following this condition to clarify that these tests shall be performed using the fuel or fuels for which emissions from the combustion turbine could have been affected by the change.
10. Deleted previous Specific Condition B.23. referencing Appendix CR, Common Requirements.
11. Specific Condition B.26. was inserted into the renewed permit to ensure that all compliance options established under permit No. 0490015-002-AC/PSD-FL-140A were made available for use by the facility.

12. Specific Condition B.28.a. (previous B.22.a.), Fuel Records, was revised to reflect the applicable requirements from the underlying air construction permit No. 0490015-002-AC/PSD-FL-140A.
13. Added new Section III, Subsection C to incorporate the applicable requirements from 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) for the emergency fire pump engine. Also removed Appendices 40 CFR 63, Subpart A and 40 CFR 63, Subpart ZZZZ from Appendix section, since the requirements from those Federal Rules are now explicitly listed in this new Subsection.
14. Revised Appendix CAM to incorporate updated water injection curves for control of NO_X through water injection.
15. Replaced Appendix NS, General Provisions for NSPS Subpart A with Appendix 40 CFR 60, Subpart A – General Provisions to incorporate the latest version of Subpart A requirements (effective 7/1/13).
16. Updated Appendices RR - Facility-wide Reporting Requirements, TR - Facility-wide Testing Requirements, and TV - Title V General Conditions with the latest versions of these standardized conditions.
17. Added Figure 1 to the referenced attachment portion of the Appendix document for convenience in complying with the excess emissions reporting requirements.
18. Revised Appendix H to reflect the three most recent permitting actions prior to the present renewal.

CONCLUSION

This project revises Title V air operation permit No. 0490015-011-AV, which was effective on January 1, 2010. This Title V air operation permit 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.