Title V Air Operation Permit Renewal
Permit No. 0850102-022-AV

APPLICANT

The applicant for this project is Indiantown Cogeneration, L.P. The applicant's responsible official and mailing address are: Todd Shirley, Projects General Manager, Indiantown Cogeneration, L.P., Indiantown Cogeneration Plant, 13303 SW Silver Fox Lane, Indiantown, Florida 34956.

FACILITY DESCRIPTION

The applicant operates the existing Indiantown Cogeneration Plant, which is located in Martin County at the intersection of Silver Fox Lane and State Road 710, Indiantown, Florida.

The Indiantown Cogeneration Plant is a cogeneration facility which generates electricity for sale and exports steam to the Louis Dreyfus Citrus Processing Plant. The facility includes one high-pressure pulverized coal main boiler (PC boiler) rated at 3,422 million British thermal units (MMBtu)/hour heat input, and has a nominal net electrical power output of approximately 330 megawatts (MW). It is permitted to fire natural gas, propane, or No. 2 fuel oil for startup, shutdown, or load changes.

Also included are two natural gas (or propane) fired identical auxiliary boilers used for supplying steam to the steam host during times when the PC boiler is offline, as well as during PC boiler startup and shutdown periods. The two identically sized packaged water-tube steam boilers have a combined rated maximum capacity of 350 MMBtu/hr.

Steam produced by the auxiliary boilers is not used to generate electricity. In addition, the facility has a variety of ancillary equipment needed to support operations as a coal-fired cogeneration plant, including a coal handling system; a lime handling system; an emergency diesel generator; and, an emergency diesel water pump.

The permittee may install and operate a temporary package boiler in the event that the PC boiler and at least one auxiliary boiler are inoperable. The facility consist of the following regulated emission units (EU)

EU No.	Brief Description
001	Pulverized Coal Main Boiler
004	Coal Handling System
005	Ash Handling System
006	Lime Handling System
007	(2) Victory Energy Model 23M Keystone Packaged Water-tube Steam Boilers
008	Temporary Package Boiler
009	Emergency Diesel Fire Pump
010	Emergency Diesel Generator

This facility also includes miscellaneous insignificant emissions units and/or activities.

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

Initial Title V Air Operation Permit issued October 11, 1999
Application for a Title V Air Operation Permit Renewal received May 20, 2014

PRIMARY REGULATORY REQUIREMENTS

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

HAP: The facility is identified as a major source of hazardous air pollutants (HAP).

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. The facility has the following emission units subject to NSPS requirements.

Regulation	EU No(s).
40 CFR 60, Subpart A, NSPS General Provisions	001, 004, 007, 008
40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Generating Units	001
40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	007
40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	008
40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants	004

NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63. The facility has the following emission units subject to NESHAP requirements.

Regulation	EU No(s).
40 CFR 63, Subpart A, NESHAP General Provisions	001, 007, 009, 010
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	009, 010
40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	007
40 CFR 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units	001

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

Siting: Unit 1 was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: The facility is subject to compliance assurance monitoring (CAM). Because continuous emissions monitors (CEMS) are used to demonstrate compliance with the applicable standards for NO_X and sulfur dioxide (SO_2), a CAM plan is not required for either the selective catalytic reduction (SCR) system, or the spray dryer absorber. However, a CAM plan is required for the fabric filter baghouse.

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

PROJECT REVIEW

There have been no changes to the facility's operations. However, the renewed permit has been changed to reflect certain newly effective federal ("MACT") regulations and other minor updates, as follows:

- Emission Unit 001 (the Pulverized Coal Main Boiler) is subject to 40 CFR 63, Subpart UUUUU-National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units since it is a fossil fuel-fired combustion unit of more than 25 megawatts. It is classified as "existing" unit since it was constructed prior to May 3, 2011 and has not been reconstructed. In addition, the Pulverized Coal Main Boiler is considered a coal-fired unit not using low rank virgin coal. The Pulverized Coal Main Boiler must come into compliance with the requirements of Subpart UUUUU no later than April 16, 2015. Subpart UUUUU applies the following emission limits to the Pulverized Coal Main Boiler (EU 001):
  1. *Filterable Particulate Matter (PM)*. Emissions of PM shall not exceed either 0.030 pound/million British thermal unit (lb/MMBtu) or 0.30 pound per megawatt-hour (lb/MWh). In lieu of the filterable PM emission limit, the permittee may select to meet a total non-Hg HAP metals emission limit of either 5.0 x 10^{-5} lb/MMBtu or 0.50 pounds per gigawatt-hour (lb/GWH). Finally, in lieu of ether filterable PM or total non-Hg HAP metals emission limits the permittee my meet the following individual HAP metal emission limits:
     - Antimony (Sb) – 0.80 pounds per terra Btu (lb/TBtu) or 8.0 x 10^{-3} lb/GWh.
     - Arsenic (As) – 1.1 lb/TBtu or 0.020 lb/GWh.
     - Beryllium (Be) – 0.20 lb/TBtu or 2.0 x 10^{-3} lb/GWh.
     - Cadmium (Cd) – 0.30 lb/TBtu or 3.0 x 10^{-3} lb/GWh.
     - Chromium (Cr) – 2.8 lb/TBtu or 0.030 lb/GWh.
     - Cobalt (Co) – 0.80 lb/TBtu or 8.0 x 10^{-3} lb/GWh.
     - Lead (Pb) – 1.2 lb/TBtu or 0.020 lb/GWh.
     - Manganese (Mn) – 4.0 lb/TBtu or 0.050 lb/GWh.
     - Nickel (Ni) – 3.5 lb/TBtu or 0.040 lb/GWh.
     - Selenium (Se) – 5.0 lb/TBtu or 0.060 lb/GWh.
  2. *Hydrogen Chloride (HCl)*. Emissions of HCl shall not exceed either 2.0 x 10-3 lb/MMBtu or 0.020 lb/MWh. In lieu of HCl emission limit, the permittee may select to meet a SO_2 emission limit of either 0.20 lb/MMBtu or 1.5 lb/GWH.
  3. *Mercury (Hg)*. Emissions of Hg shall not exceed either 1.2 lb/TBtu or 0.013 lb/GWh.

  Compliance with the above emissions limits shall be demonstrated pursuant to one of the available options specified in 40 CFR 63, Subpart UUUUUU which is included as an appendix in the renewed Title V permit. The permittee shall also comply with the recordkeeping and reporting requirements specified in the appendix.

- The "Test Methods" table within Section III, Subsection A of the permit has been amended to add EPA Method 30B for determination of Mercury (Hg) emissions per 40 CFR 63, Subpart UUUUU.

- Emission Unit 007 (the Aux Boilers) are subject to 40 CFR 63, Subpart DDDDD ("Major Source Boiler MACT"). The Aux Boilers are classified as "existing" since they were constructed prior to June 4, 2010, and they are subcategorized as "units designed to burn gas 1 fuels." (The same provisions apply to each of the two Aux Boilers).

- The Diesel Fire Pump, and the Emergency Generator were formerly classified as Insignificant Activities and are now classified as regulated emissions units and are included in the permit. Since they are diesel fuel-fired reciprocating engines constructed prior to June 12, 2006, they are subject to 40 CFR 63, Subpart ZZZZ ("RICE MACT") and are classified as Existing, Stationary Compression-

Ignition Emergency RICE (rated under 500 hp).

- The Portable Diesel Water Pump is not subject to 40 CFR 63, Subpart ZZZZ ("RICE MACT") and has been included in the list of Insignificant Activities.
- Emission Unit 007 (Two Auxiliary Boilers) utilizes an O_2 CEM system, rather than a CO_2 CEM system. Accordingly, any references to a CO_2 CEM within Section III, Subsection F of the permit were amended to refer an O_2 CEM.
- Facility-wide conditions **FW6.** ; **FW7.**; and, Appendix RR, Facility-wide Reporting Requirements were changed to reflect the new Annual Operating Report and Title V Annual Emissions Fee rule requirements.

CONCLUSION

This project renews Title V air operation permit No. 0850102-019-AV, which was effective on November 23, 2009. 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.