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PERMITTEE

Pasco Cogeneration, Ltd.
14850 Old State Road 23
Dade City, Florida 33523

Authorized Representative:
Richard Christmas, Plant Manager

Air Permit No. 1010071-010-AC
Permit Expires: June 1, 2011
Pasco Cogeneration Facility
Minor Source Air Construction Permit
Installation of Oxidation Catalyst
Control Systems

PROJECT AND LOCATION

This permit authorizes the installation of oxidation catalyst control systems to the existing two General Electric (GE) LM-6000 combustion turbine (CT) units. The proposed work will be conducted at the Pasco Cogeneration Facility, which is a combined cycle combustion turbine cogeneration plant (Standard Industrial Classification No. 4911). The facility is located in Pasco County at 14850 Old State Road 23 in Dade City, Florida. The UTM coordinates are Zone 17, 383.5 km East, and 3,139.0 km North.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality. Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

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Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

6/4/10
(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 6/4/10 to the persons listed below.

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Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) (Date) 6/4/10

FACILITY AND PROJECT DESCRIPTION

Existing Facility

Pasco Cogeneration, Ltd. owns the Pasco Cogeneration Facility, which is a combined cycle CT cogeneration plant. The facility consists of two GE LM-6000 CT units. Each unit is equipped with an inlet chiller and supplementary fired duct burner and exhausts through a Heat Recovery Steam Generator (HRSG) stack. Natural gas is the primary fuel fired in the CT, with distillate oil used as a restricted alternate fuel.

In 2008, a spray inter-cooling (SPRINT) system was installed on each CT unit. A continuous emission monitoring system (CEMS) for monitoring and reporting nitrogen oxide (NO_X) emissions was also installed on each unit. The facility consists of the emission units given below.

Facility ID No. 1010071

ID No.	Emission Unit Description
001	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.
002	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.

Proposed Project

The proposed project authorizes the installation of an oxidation catalyst system in the HRSG associated with each of the two CT units. The oxidation catalyst system is used to control or reduce carbon monoxide (CO) emissions. The catalyst (stainless steel foil coated with calcined alumina with platinum metal) enhances the chemical reaction between oxygen and CO and forms carbon dioxide. This project generally provides for emission control of CO in the range of 50 to 70%. The project will also result in an emission reduction of volatile organic compounds (VOC). This project will modify the following emissions units.

Facility ID No. 1010071

ID No.	Emission Unit Description
001	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.
002	Unit No. 1 - Combustion Turbine with chiller system, SPRINT spray inter-cooling, duct burner, and HRSG.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

Emissions Units 001 and 002

Description: Each unit consists of a GE Model LM-6000 CT, HRSG with duct firing, chiller system, and SPRINT spray inter-cooling. Steam generated in the HRSG is directed to a common steam turbine-electrical generator (STG), which is rated at 26.5 megawatts (MW).

Fuel: Each unit fires pipeline natural gas as the primary fuel and distillate oil as a restricted alternate fuel.

Capacity: At a turbine inlet temperature of 51°F, the maximum heat input rate from gas firing based on the lower heating value (LHV) is: 424 million British thermal units (MMBtu) per hour without SPRINT, which produces approximately 45 MW; or 450 MMBtu per hour with SPRINT, which produces approximately 52 MW.

NO_X Controls: A water injection system is used to reduce NO_X emissions. The water-to-fuel ratio is monitored continuously and adjusted by the automatic control system based on load conditions.

CO Controls: This project adds an oxidation catalyst system to each CT unit to reduce CO and VOC emissions.

Stack Parameters: The stack is a maximum of 11 feet in diameter and at least 100 feet tall. At base load conditions and a compressor inlet temperature of 51°F, exhaust gas exits the stack at approximately 250°F with a volumetric flow rate of approximately 320,253 actual cubic feet per minute (acfm)

CEMS: Each unit is equipped with a CEMS to monitor NO_X emissions.

EQUIPMENT

1. Oxidation Catalyst System: The permittee is authorized to install an EmeraChem (or equivalent) oxidation catalyst system in the HRSG of each CT unit. The catalyst, which is stainless steel foil coated with calcined alumina with platinum metal, enhances the chemical reaction between oxygen and CO. The use of this oxidation catalyst system generally provides for an emission reduction of CO in the range of 50% to 70%, depending on the exhaust gas temperature. [Application No. 1010071-010-AC]

EMISSION LIMITS AND PERFORMANCE STANDARDS

{Permitting Note: This project adds an oxidation catalyst system to each CT unit. There are no changes to any permitted capacities, operational restrictions or emission standards in any previously issued air construction or Title V permits.}

TESTING REQUIREMENTS

2. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the CO emissions standards specified in the Title V air operations permit. The initial tests shall be conducted within 60 days after completing construction of the oxidation catalyst project and achieving maximum production capacity, but not later than 180 days after initial operation of the unit with the oxidation catalyst. Satisfactory test results may be used to demonstrate annual compliance required by the Title V air operation permit for the year that the initial compliance test took place. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

3. Test Notifications: At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test. The notification shall also include the name and phone number of the contact person who will be responsible for coordinating and having the tests conducted. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]