TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

APPLICANT

Orlando Utilities Commission
Curtis H. Stanton Energy Center

Orange County

PROJECT

DEP File No.: 0950137-009-AC
Unit 1 Burner Replacement Project

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Air Permitting South Section
MS #5505, 2600 Blair Stone Road
Tallahassee, FL 32399-2400

October 4, 2005

1. GENERAL PROJECT INFORMATION

Application Processing Schedule

- September 14, 2005 Application received for Unit 1 burner replacement project.
- September 14, 2005 Complete Application.
- October 3, 2005 E-mail notifying the Department of a Change to the Scheduled Outage Date.

Relevant Documents

- Permits PSD-FL-084 and PSD-FL-084A issued by EPA for the construction of Units 1 and 2;
- Current Title V Air Operation Permit Renewal No.: 0950137-006-AV; and
- Department's Technical Evaluation and Preliminary Determination dated [Month day, 2005].

2. FACILITY DESCRIPTION AND LOCATION

The Curtis H. Stanton Energy Center is located at 5100 Alafaya Trail, Orlando, Orange County. The map coordinates are: UTM Zone 17, 484.00 km East and 3150.50 km North; and Latitude: 28° 28' 50" North and Longitude: 81° 09' 40" West.

This facility consists of two coal-fired boilers (Acid Rain Phase II Units) and two gas-fired combustion turbines serving a single steam-electrical generator (Acid Rain Phase II Units).

There are storage and handling facilities for solid fuels, fly ash, limestone, gypsum, slag, and bottom ash.

Units Nos. 1 and 2 each consist of one Babcock and Wilcox boiler/steam generator (Model RB 611) and steam turbine, which drives a generator with a nameplate rating of 468 Megawatts. Each boiler/steam generator is a coal-fueled, wall fired, dry bottom unit that uses No. 6 fuel oil used for startup and flame stabilization. Each unit has a stack. Each unit is equipped with an electrostatic precipitator for control of particulate matter (PM/PM_{10}) and a limestone scrubber for sulfur dioxide (SO_2) control. Additionally, Unit 2 is equipped with a selective catalytic reduction (SCR) system for nitrogen oxides (NO_X) control. Units 1 and 2 began commercial operation in 1987 and 1996, respectively.

3. PROPOSED PROJECT

The proposed project affects the following existing emissions unit:

E.U. ID No.	Brief Description
-001	Fossil Fuel Fired Steam Generator # 1

Fossil fuel fired steam generator # 1 is a nominal 468 megawatt steam generator designated as Unit # 1. The emission unit is fired primarily on bituminous coal and secondarily on No. 6 fuel oil for startup and flame stabilization, as permitted herein, with a maximum heat input of 4,286 MMBtu/hour.

Proposed Activity

The applicant proposes to replace 6 of the 30 burners in the upper portion of the Unit 1 boiler furnace. The applicant claims that due to the age, location, material grade and low load operation of the burners, the 6 burners have experienced heat and erosion damage beyond repair. The project cost is estimated to be approximately $204,000. OUC provided their capital expenditure estimate along with the vendor, Power & Industrial Services Corp., quotation {see Attachment 3 of the submitted application}.

The proposed activity is to take place during the next scheduled outage, commencing approximately February 25, 2006, with a project completion date of March 26. An expiration date of July 31, 2006, for this air construction permit should allow sufficient time to complete the required monitoring and to submit the report.

4. APPLICABLE REGULATIONS

Regulatory Classifications

Title III: Based on the initial Title V permit, the facility is a major source of hazardous air pollutants.

Title IV: The facility operates emissions units that are subject to the Phase II, Federal Acid Rain Program.

Title V: The facility is classified as a “major” source of air pollution with respect to Title V of the Clean Air Act because emissions of at least one regulated criteria air pollutant exceeds 100 tons per year.

PSD: The project is located in an area designated as “attainment” or “unclassifiable” for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a “fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input”, which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of

Significant Deterioration (PSD) of Air Quality. The three units were built pursuant to PSD permits and determinations of best available control technology (BACT).

NSPS: Units 1 and 2 are subject to Subpart Da and the combined cycle unit is subject to Subparts GG and Db of the New Source Performance Standards in 40 CFR 60.

Permit(s) Required

The Department requires the owner or operator of any emissions unit to obtain an appropriate permit prior to beginning construction, modification, or initial or continued operation, unless exempted pursuant to Department rule or statute. The Department has specific rules on when an air construction permit is required {see Rule 62-210.300(1), F.A.C.}, when an air operation permit is required {see Rule 62-210.300(2), F.A.C.} and when activity is exempt from permitting {see Rules 62-210.300(3) and 62-4.040, F.A.C.}. The proposed activity is not specifically exempted from permitting in Rules 62-210.300(3) or 62-4.040, F.A.C.

Increase in Actual Emissions or New Emissions

The Department's definition of a "modification" also allows certain activities to be specifically excluded if there is not an increase in "actual emissions" or new emissions. In paragraph (168), the proposed change would have to result in an increase in "actual emissions" {see citation below for definition (168), with emphasis added}. Department rules contain a definition for "actual emissions" {see citation below for definition (11)}.

> *Rule 62-210.200(168), F.A.C. - Definitions*
> *Effective: 07/06/05*
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> *(168) "Modification" – Any physical change in, change in the method of operation of, or addition to a facility* ***which would result in an increase in the actual emissions of any air pollutant subject to regulation under the Act, including any not previously emitted, from any emissions unit or facility****.*
> *(a) A physical change or change in the method of operation shall not include:*
> *1. Routine maintenance, repair, or replacement of component parts of an emissions unit; or*
> *2. A change in ownership of an emissions unit or facility.*
> *(b) For any pollutant that is specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975.*
> *(c) For any pollutant that is not specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would exceed any restriction on hours of operation or production rate included in any applicable Department air construction or air operation permit.* ***{emphasis added}***
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> *(11) "Actual Emissions" – The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:*
> *(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be*

calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.
(b) The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limits are federally enforceable.
(c) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (d) of this definition) which has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date.
(d) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following a physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change, provided the owner or operator maintains and submits to the Department on an annual basis, for a period of 5 years representative of normal post-change operations of the unit, within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in an emissions increase. The definition of "representative actual annual emissions" found in 40 C.F.R. 52.21(b)(33) is adopted and incorporated by reference in Rule 62-204.800, F.A.C.

The burners are part of the original boiler installation which commenced commercial operation on May 12, 1987; the burners have been in the boiler for over 18 years. The applicant did not request a change to the capacity of this emissions unit, i.e., heat input {MMBTU/hr} or electrical output {MW}. The replacement burners are not identical. The applicant claims the new replacement burners are *"functionally equivalent or a like-kind"* replacement. The replacement of the burners is considered to be a physical change to the emissions unit.

The applicant claims that there will not be a *"change in the method of operation or in emissions impacts"* from this proposed activity. To support their claim, the applicant provided data in their permit application on the annual utilization of the unit, annual emissions and hourly heat input. Attachment 1 in the application summarizes annual utilization over the most recent 5-year period (Table 1) and Table 2 summarizes the most recent 5-year period of annual emissions. Based on the hours of operation and yearly heat inputs in Table 1, Unit # 1 has been operating at or above 90% of the unit's capacity of 4,286 MMBtu/hr. Attachment 2 shows the hourly heat input readings from the acid rain CEMS for the most recent available quarter. The readings on this graph show the unit operating up to 4,500 MMBtu/hr. The acid rain CEMS tends to overestimate heat input. Based on this information provided by the applicant in their permit application, a significant net emissions increase is not expected from this proposed activity.

5. PRELIMINARY DETERMINATION

The applicant submitted an application for an air construction permit for the proposed activity. A significant net emissions increase is not expected from the proposed activity. The Department requires an air construction permit for the owner or operator to proceed with the proposed activity.

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application,

reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Scott M. Sheplak, P.E. is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

6. LIMITATIONS OF DEPARTMENT'S OPINION

The Department's preliminary determination is based only on the facts presented by the applicant, the Department rules to evaluate the proposed project, and the federal regulations upon which they were clearly based. The Department's opinion does not consider any other conceivable past projects that when aggregated with the present one could result in significant net emissions increases. It does not serve as a shield against any conceivable actions contemplated (to which the Department is not privy) by EPA as a result of any inquiries via the Section 114 process into past projects by the applicant at the facility. Furthermore the Department's determination is strictly limited to this specific case and should not be used as a precedent for other cases, or lead to unintended consequences construed from the language contained in this determination. Ultimately, it is the Department that interprets its own regulations and opinions.

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