Florida Department of Environmental Protection

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PERMITTEE

TECO
13031 Wyandotte Road
Apollo Beach, Florida 33572

Authorized Representative:
Mr. Byron Burrows, P.E.

Permit No. 0570039-058-AC
Permit Expires: 6/1/14
Minor Air Construction Permit

Big Bend Station
Unit 3 Furnace and ESP Enhancements

PROJECT

This is the final air construction permit, which authorizes modifications and maintenance on the Unit 3 furnace and upgrades to the ESP. The proposed work will be conducted at the existing Big Bend Station, which is a electrical power generation plant categorized under Standard Industrial Classification No. 4911. The existing facility is located in Hillsborough County at 13031 Wyandotte Road, Apollo Beach, Florida. The UTM coordinates are Zone 17; 361.9 km East and 3075.0 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

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. 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.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

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Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

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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 the date indicated below to the following persons.

Mr. Byron Burrows, P.E., TECO: btburrows@tecoenergy.com
Mr. Rob Velasco, P.E., TECO: ravelasco@tecoenergy.com
Mr. Robert Wong, SWD: robert.wong@dep.state.fl.us
Mr. Jerry Campbell, HCEPC: Campbell@epchc.org
Ms. Anne Harvey, Earth Justice: aharvey@earthjustice.org
Ms. Kathleen Forney, U.S. EPA Region 4: forney.kathleen@epa.gov
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Ms. Barbara Friday, DEP - OPC: barbara.friday@dep.state.fl.us
Ms. Lynn Scearce, DEP - OPC: lynn.scearce@dep.state.fl.us

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.

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FACILITY DESCRIPTION

The existing facility consists of the following emissions units.

Facility ID No. 0570039	
ID No.	**Emission Unit Description**
Unit 1-4	Fossil Fuel Fired Steam Generators
CT1-3	Simple Cycle Combustion Turbines
	Coal, Petroleum Coke, Limestone, Gypsum, Slag, Ash and fuel oil storage and handling

PROPOSED PROJECT

This project will modify the following emissions units.

Facility ID No. 0570039	
ID No.	**Emission Unit Description**
Unit 3	**Fossil Fuel Fired Steam Generator**

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates 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 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Hillsborough County Environmental Protection Commission (HCEPC), Air Management Division. The mailing address and phone number of the HCEPC are 3629 Queen Palm Drive, Tampa, Florida 33619-1309; (813) 627-2600 and (813) 627-2620 (fax).

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); and Appendix C (Common Conditions).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) & 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

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9. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

10. Actual Emissions Reporting: This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

    a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies (below) could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

    b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

        (1) The name, address and telephone number of the owner or operator of the major stationary source;

        (2) The annual emissions calculations pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

        (3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

        (4) Any other information that the owner or operator wishes to include in the report.

    c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

    For this project, the permit requires annual reporting of actual *PM, CO,* NO_X *and* SO_2 emissions for *Unit 3*.

    [Application 0570039-058-AC; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

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Unit 3 Boiler

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
Unit 3	*445 MW Coal fired Steam Generator with FGD, SCR and ESP including a continuous PM monitor*.

EQUIPMENT

1. Unit 3 Boiler: The permittee is authorized to modify the furnace nose cone and radiant and convective sections of the furnace, which will result in additional boiler tube surface area, and also to upgrade the Unit 3 ESP with rigid electrodes, wide plate spacing and electrical component upgrades. Specifically, in order to reduce slagging and fouling of boiler tubes, the applicant is authorized to replace the high temperature superheater (HTSH), reheater (HTR), the economizer, the radiant superheater (RSH), and to modify the nose arch by extending it. The ESP upgrades are authorized to implement the Consent Order requirements and the EPA approved Best Operating Practices (BOP) for PM. [Application No. 0570039-058-AC and Big Bend Generating Station BOP for Particulate Matter revised October 2005]

PERFORMANCE RESTRICTIONS

2. Permitted Capacity: The design heat input is 4,115 MMBTU/hr [Rule 62-210.200(PTE), F.A.C.]

3. Authorized Fuels: Coal, or a coal/petroleum coke blend, or coal blended with raw coal residual, or a coal/petroleum coke blend further blended with raw coal residual. In any case, the petroleum coke content of any fuel blend shall not exceed 20% by weight. [Application No. 0570039-058-AC and Rule 62-210.200(PTE), F.A.C.]

4. Restricted Operation: The hours of operation are not limited (8,760 hours per year). [Rules 62-4.070(3) & 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

5. No new emission standards are imposed by this permit. All previously established emissions limiting conditions remain in effect and are unchanged. [62-4.070, F.A.C.]

TESTING REQUIREMENTS

6. No new testing requirements are imposed by this permit.

MONITORING REQUIREMENTS

7. No additional monitoring requirements are imposed other than the requirements from Section 2, Condition 10, to monitor PM, CO, NO_X and SO_2 for a 5 year period, commencing with the first full year following the year in which the enhancements are completed. [Rules 62-212.300(1)(e) & 62-210.370, F.A.C.]

RECORDS AND REPORTS

8. No additional reports are required other than the annual actual emissions report from Section 2, Condition 10. [Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

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