Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

April 24, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Karen Sheffield, General Manager
Big Bend Station
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601-0111

Re: **Big Bend Units No. 3 and 4**
DEP File No. **0570039-023-AC**
Fly Ash Carbon Burn-out (CBO) Process

Dear Ms. Sheffield:

Enclosed are documents indicating the Department's intent to issue an air construction permit for the installation of a Fly Ash Carbon Burn-out (CBO) Process on Units No. 3 and 4 at the Big Bend Station in Tampa. The documents include: the "Intent to Issue Air Construction Permit"; the "Public Notice of Intent to Issue Air Construction Permit"; the Department's "Technical Evaluation and Preliminary Determination"; and the Draft Permit.

The Public Notice must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven (7) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Electronic versions of these documents have been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (U.S. EPA) Region 4 office's review. The web site address is:

http://www.dep.state.fl.us/air/eproducts/ards/default.asp (Permit No. 0570039-023-AC)

Please submit any other written comments you wish to have considered concerning the Department's proposed action to Mr. A. A. Linero, Program Administrator, Permitting South Section, at the above letterhead address. If you have any questions, please call Tom Cascio at 850/921-9526, or Mr. Linero at 850/921-9523.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/tbc

Enclosures

In the Matter of an
Application for Permit by:

Ms. Karen Sheffield, General Manager
Big Bend Station
Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111

DEP File No. 0570039-023-AC
Fly Ash Carbon Burn-out (CBO) Process
Big Bend Station Units No. 3 and 4
Hillsborough County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of permit attached) for the project, detailed in the application specified above and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Tampa Electric Company (TEC), operates the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County. TEC applied on August 10, 2005, for an air construction permit to install a fly ash carbon burn-out (CBO) process at the Big Bend Station. The Applicant has emphasized that CBO technology is an integral component of their Big Bend Station nitrogen oxides (NO_x) pollution control projects required by the U.S. Environmental Protection Agency (EPA) Consent Decree and Florida Department of Environmental Protection (FDEP) Consent Final Judgment. The air construction permit will also establish this specific project as applicable Title V Operation Permit conditions.

The Department has permitting jurisdiction under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. This action is not exempt from permitting procedures. The Department has determined that an air construction permit is required. The Department intends to issue this air construction permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying

(implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit (including the Public Notice, Technical Evaluation and Preliminary Determination, and the Draft permit) was sent by certified mail (*) and copies were mailed by U.S. Mail or by e-mail before the close of business on 4/24/06 to the person(s) listed:

Karen Sheffield, General Manager, TEC Big Bend Station*
Thomas Davis, P.E., Environmental Consulting and Technology, Inc., via e-mail
Shelly Castro, TEC, via e-mail
Alice Harman, EPCHC, via e-mail
Mara Nasca, FDEP-SWD, via e-mail
David Lloyd, EPA Region 4, via e-mail
Buck Oven, Power Plant Siting Section, via e-mail

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) (Date) 4/24/06

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570039-023-AC

Tampa Electric Company
Big Bend Station, Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to the Tampa Electric Company (TEC) for the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County. The applicant's mailing address is: Tampa Electric Company, P.O. Box 111, Tampa, Florida 33601-0111.

This permit is for the installation of a fly ash carbon burn-out (CBO) process as a modification to Steam Generator Units No. 3 and 4. This technology includes a CBO fluidized bed combustor that will be integrated into the steam generators, as well as ancillary fly ash handling equipment. The CBO process is necessary to make the fly ash resulting from the Consent Final Judgment and the Consent Decree more marketable.

A Best Available Control Technology (BACT) determination was not required pursuant to Rules 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The air construction permit will also establish this specific project as applicable Title V Operation Permit conditions. The Department will issue the final construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed construction permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice. The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any

subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation Suite 4, 111 S. Magnolia Drive Tallahassee, Florida, 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Southwest District 13051 N Telecom Parkway Temple Terrace, FL 33637-0926 Telephone: 813/ 632-7600 Fax: 813/ 632-7665	Hillsborough County Environmental Protection Commission Air Management Division 3629 Queen Palm Drive Tampa, Florida 33619 Telephone: 813/627-2600

The complete project file includes the permit application, technical evaluation, Draft construction permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project, Tom Cascio, at MS 5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or Tom.Cascio@dep.state.fl.us , or call 850/921-9526 for additional information. Key documents may also be viewed at: www.dep.state.fl.us/Air/permitting/construction.htm in the power plant category.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

APPLICATION INFORMATION

Applicant Name and Address:
Tampa Electric Company (TEC)
P.O. Box 111
Tampa, Florida 33601-0111

Representative: Karen Sheffield, General Manager, Big Bend Station

Reviewing and Process Schedule:

August 10, 2005:	Application received at FDEP Bureau of Air Regulation
January 25, 2006:	Application deemed complete
	Intent to issue draft permit clerked

FACILITY INFORMATION

Facility Location: Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County

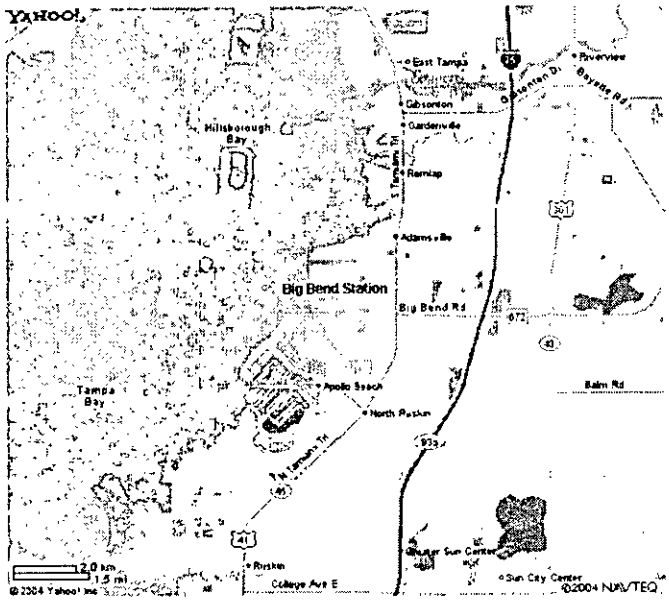

Figure 1. Ruskin, Apollo Beach, Big Bend

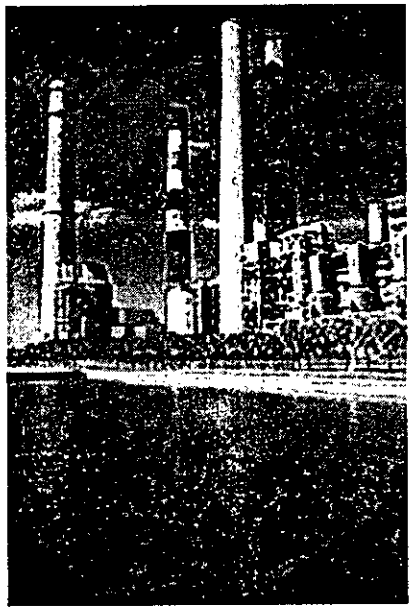

Figure 2. Big Bend Station

Standard Industrial Classification (SIC) Codes:

Major Group No.	49	Electric, Gas, and Sanitary Services
Group No.	491	Electric Services
Industry No.	4911	Electric Services

FACILITY DESCRIPTION

This facility consists primarily of four existing fossil fuel steam generators (boilers) and three simple-cycle combustion turbines. Emissions from all steam generators are controlled by electrostatic precipitators (ESPs), and flue gas desulfurization (FGD) systems. In addition, there are nitrogen oxides (NO_x) control projects utilizing selective catalytic reduction (SCR) systems currently being implemented

pursuant to the Consent Final Judgment (CFJ) between TEC and the Department and a Consent Decree (CD) between TEC and the United States Environmental Protection Agency (EPA) as noted above.

EMISSIONS UNITS

This permit addresses the modification and/or installation of the following equipment:

Emission Unit No.	System	Emission Unit / Equipment Description
003	Power Generation	445 MW Fossil Fuel Steam Generator (installation of the Carbon Burn-Out Fluidized Bed Combustor is considered a modification to Emission Unit Nos. 3 and 4)
004	Power Generation	486 MW Fossil Fuel Steam Generator (installation of the Carbon Burn-Out Fluidized Bed Combustor is considered a modification to Emission Unit Nos. 3 and 4)
040	Fly Ash Handling	CBO Feed Fly Ash Silo
041	Fly Ash Handling	CBO Feed Fly Ash Storage Dome
042	Fly Ash Handling	CBO Product Fly Ash Storage Dome
043	Fly Ash Handling	CBO Product Fly Ash Truck Loadout Storage Silo and Truck Loading
044	Fly Ash Handling	CBO Product Fly Ash Truck Fugitives

REGULATORY CLASSIFICATION

Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC). The existing facility is a major source of hazardous air pollutants (HAPs). The facility operates emissions units subject to the acid rain provisions of the Clean Air Act (Title IV).

The facility is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input". This kind of facility is one of the 28 source categories with the lower applicability threshold of 100 tons per year with respect to the Rule 62-212.400, Prevention of Significant Deterioration of Air Quality (PSD). Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source. Unit 4 was certified pursuant Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S.

PERMITTING STATUS

Operation of the Big Bend Station is authorized by the Title V Operation Permit Revision 0570039-017-AV that has an effective date of January 1, 2005, and expires on December 31, 2009. The current Title V permit includes the applicable requirements from federal and state regulations and

construction permits. It also includes a Consent Final Judgment (CFJ, DEP vs. TEC) dated December 6, 1999, and a Consent Decree (CD, EPA vs. TEC) dated February 29, 2000, and amended October 4, 2000. The CFJ and CD require substantial progressive emission reductions from the four coal fired steam generation units by specific dates.

The current Title V permit includes a number of projects or improvements pursuant to the CFJ and CD including: improved scrubbing efficiency on Units 1 and 2; Low NO_X Burners (LNBs) on Units 1, 2, and 3; installation of new coal nozzles suitable for low NO_X operation; modification redesign of windbox components to allow for proper distribution and staging of air; and installation of a separate overfire air (SOFA) system on Unit 4. TEC has received air construction permits from the Department to install selective catalytic reduction (SCR) systems for NO_x control on Units 1 through 4.

CARBON BURN-OUT (CBO) PROJECT ON UNITS 3 AND 4

TEC submitted an application to the Department on August 10, 2005, for the installation of a carbon burn-out (CBO) process at the facility. This process includes a CBO fluidized bed combustor that will be integrated into Steam Generator Unit Nos. 3 and 4, as well as ancillary fly ash handling equipment. The CBO process is necessary to mitigate the adverse environmental and operational impacts that would otherwise result from an emissions reduction program required by a Consent Final Judgment with the Department and a Consent Decree with the United States Environmental Protection Agency.

In a letter dated January 20, 2006, EPA Region 4 reported their determination that the fluidized bed combustor within the carbon burnout project can be viewed as a physical change of the existing Big Bend Units 3 and 4, and that new source review (NSR) applicability can be assessed using current Florida rules that allow comparison of actual annual emissions prior to the change with representative actual emissions after the change. Further, actual emissions from Units 3 and 4 prior to development of the carbon burnout project can be based on total emissions from Units 3 and 4 within a recent two-year period without any adjustments that take into account the Consent Decree between the federal government and Tampa Electric Company.

The applicant escaped prevention of significant deterioration (PSD) review for the current air construction permit. (Please refer to the attached Table 1., Big Bend Units 3 & 4 and CBO PSD Emission Evaluation). Because the projected net increases in actual emissions for the pollutants are below the significant emissions rates listed in Rule 62-210.200(242), F.A.C., Definitions – Significant Emissions Rates, it has been determined by the Department that this change constitutes a minor modification to the facility. Therefore, this permit modification is not subject to review under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), so neither a revised Best Available Control Technology (BACT) determination, nor an analysis of the air quality impact is required. The proposed project is otherwise subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein), and all specific conditions of the facility's existing Title V Air Operation Permit Renewal No. 0570039-017-AV.

PROJECT SCHEDULE

Emissions Unit ID Number	Estimated Start Date	Estimated Completion Date
003	June 1, 2006	December 1, 2007
004	June 1, 2006	December 1, 2007
040	June 1, 2006	December 1, 2007
041	June 1, 2006	June 1, 2007
042	June 1, 2006	December 1, 2007
043	June 1, 2006	December 1, 2007
044	June 1, 2006	December 1, 2007

BACKGROUND AND PROJECT DESCRIPTION

The Tampa Electric Company has entered into agreements with EPA and FDEP concerning the installation of additional air pollution control systems at the Big Bend Station. These agreements (EPA Consent Decree and FDEP Consent Final Judgment) included requirements to install additional systems for NO_x control on Units 1 through 4. In response to these requirements, the Tampa Electric Company determined that the installation of combustion modifications and SCR systems are the technologies to be used to reduce NO_x emissions from these units. Via prior permitting actions, the Department issued air construction permits to implement these changes at the facility. However, installation of these systems to effect NO_x reductions will necessarily impact the Tampa Electric Company's current beneficial reuse of its fly ash at the Big Bend Station.

Combustion by-product fly ash generated at Units 1 through 4 is presently transferred offsite and used as a raw material in the production of Portland cement or as a substitute for Portland cement in the production of concrete. The current and planned NO_x control systems for Units 1 through 4 will increase the fly ash carbon and ammonia concentrations to levels that will render the fly ash unusable as a Portland cement raw material or substitute. The Big Bend Station generates approximately 280,000 tons of fly ash per year as a result of its operations; 100 percent of that fly ash is currently transferred offsite for use in the production of either Portland cement or concrete. If the fly ash cannot be used for those purposes, this could potentially result in the landfill disposal of 280,000 tons of fly ash annually.

In addition to reducing NO_x to molecular nitrogen, the SCR control systems will unavoidably increase boiler flue gas sulfur trioxide (SO_3) concentrations due to the oxidation of sulfur dioxide (SO_2) to SO_3 by the SCR catalyst. SO_3 vapor will subsequently condense to form sulfuric acid mist aerosol as the flue gas temperature is reduced in the inlet to the wet flue gas desulfurization (FGD) control system. Sulfuric acid mist aerosol is not efficiently removed by wet FGD control systems. To avoid corrosion downstream of the ductwork and ESP internals, and avoid potential plume opacity problems, ammonia injection systems will be installed at the Big Bend Station to mitigate the environmental impacts of SO_3 formation by the SCR control systems. The ammonia injection systems will further increase the fly ash ammonia concentration to levels that are well above the maximum concentration (i.e., 50 parts per million) required for recycling the fly ash as a Portland cement raw material or substitute.

The SCR and the control measures to mitigate SO_3 formation will alter the quality of the fly ash so that it cannot be recycled in the current manner. The CBO technology will be installed to produce a low-carbon, low-ammonia, fly ash material suitable for reuse in cement and concrete production (in lieu of landfilling the fly ash). The technology will also recover a significant portion of the energy contained in the high-carbon fly ash for beneficial use at the Big Bend Station. Thus, it is expected that the heat

recovered from the process will displace the energy derived from solid fuels that would otherwise be burned in Units 3 and 4, resulting in a fuel savings and corresponding reduction in air emissions.

An issue raised during pre-application meetings was that of potential mercury (Hg) emissions associated with the CBO process. The Applicant reported that extensive testing conducted by the process vendor, Progress Materials, Inc. (PMI), confirmed that essentially all of the mercury present in the feed fly ash to the process will remain with the process product fly ash and therefore concluded that mercury emissions are not an issue. This finding was substantiated by the Department's own internal analysis. The DEP Bureau of Laboratories Chemistry Section analyzed samples of feed and product fly ash taken from CBO installations in South Carolina. It appears that Hg is effectively retained in the product fly ash (in the range of 0.5 to 0.8 ppm by weight) at those facilities. It is reasonable to expect (as TEC and PMI claim) for the present application that Hg will end up in the product that will ultimately be sold for use in concrete.

The permittee shall conduct initial and annual sampling for NO_x and CO of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct in accordance with the requirements of Rule 62-297.310(7)(a)4.b., F.A.C. Testing of mercury (Hg) is also required by this permit; the permittee shall conduct initial and annual sampling for Hg emissions of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct. The existing SO_2 CEMS located downstream of Units 3 and 4 FGD shall be used to monitor SO_2 emissions from Units 3 and 4 and the CBO return. Consistent with current testing requirements, initial and annual of sampling for particulate matter (PM) shall also be conducted downstream of Units 3 and 4 FGD to measure PM from Units 3 and 4 and the CBO return.

PROCESS DESCRIPTION

CBO™ technology is a proprietary, patented, environmentally beneficial technology whose primary function is the production of low-carbon, low-ammonia fly ash material suitable for commercial use as a Portland cement raw material or substitute. Major components of the process planned for the Big Bend Station include a feed fly ash silo, feed and product fly ash storage domes, fluidized bed combustor (FBC), hot cyclones for fly ash recycle to the FBC, heat recovery heat exchanger, cold cyclone and fabric filter baghouse for product fly ash recovery, and product fly ash truck loading.

Fly ash from Units 1 through 4 electrostatic precipitators (ESPs) will be conveyed pneumatically o the feed fly ash silo or feed fly ash storage dome. The ESPs are located downstream of the SCR and SO3 air emission control systems and therefore will collect high-carbon, ammoniated fly ash from Units 1 through 4 combustion gas streams. The feed fly ash silo will vent through a baghouse prior to discharging to the atmosphere. The feed fly ash storage dome will also vent through a baghouse prior to discharging to the atmosphere.

Fly ash from the feed silo will then be fed to the FBC for oxidation of carbon contained in the fly ash to carbon dioxide. The high temperature FBC process will also reduce fly ash ammonia compounds to molecular nitrogen (N_2) and water. The CBO technology does not require any auxiliary fuel to operate, with the limited exception of a minimal amount of startup fuel to initiate the combustion process. As with any fossil fuel combustion process, the FBC combustion gases will also contain combustion by-products including NO_x, carbon monoxide (CO), SO2, particulate matter less than or equal to 10 micrometers (PM_{10}), and volatile organic compounds (VOCs). The CBO process includes a forced draft fan to provide fluidization and combustion air to the FBC. An induced draft fan maintains the FBC freeboard pressure slightly below atmospheric pressure.

The FBC exhaust stream will be routed through hot cyclones to capture fly ash entrained in the FBC exhaust stream. Fly ash captured by the hot cyclones is returned to the FBC. The hot cyclones exhaust and FBC low carbon product ash streams are combined and sent to the gas/product cooler heat exchanger for heat recovery. Thermal energy recovered from the process will be used to heat condensate from the Units 3 and/or 4 low-pressure feedwater systems. Unit 3 will be the primary recipient of the recovered process energy; Unit 4 will be used during periods when Unit 3 is not available. Reuse of the process recovered energy saves fuel that would otherwise need to be burned in Units 3 and 4. This will result in less coal being consumed per Unit of electric output, with corresponding reductions in air pollutant emissions. The improvement in Unit 3 and Unit 4 heat rate, due to the use of recovered energy from the process, represents recovery of a portion of the efficiency lost when combustion controls were installed on Units 3 and 4 for NO_x reduction purposes. Lower combustion efficiency is a consequence of the lower flame temperatures and lower oxygen available in the combustion zone which is necessary to reduce NO_x emissions. This is the reason for the increase in fly ash carbon content.

Following heat recovery, the cooled FBC combustion gases, containing entrained product fly ash, will be routed through a cold cyclone and fabric filter baghouse for product fly ash separation. The exhaust from the fabric filter baghouse (i.e., the CBO return) will be routed to the inlet of Units 3 and 4 flue gas desulfurization (FGD) emission control system and subsequently discharged to the atmosphere through the existing Units 3 and 4 stacks. Product fly ash separated by the cold cyclone and fabric filter baghouse will be sent to a surge bin. A portion of the cooled, low-carbon product will be recycled to the FBC for temperature control. The remaining product ash is then conveyed pneumatically to the product fly ash storage dome or directly to the truck loadout silo. The product fly ash storage dome will vent through a baghouse prior to discharging to the atmosphere. The feed and product fly ash storage domes will be used to provide flexibility in product fly ash marketing. Product fly ash will be conveyed to the truck loadout silo for subsequent transfer to trucks for shipment to offsite customers. The PM_{10} emissions captured during the truck loading process will be routed to the truck loadout silo which will vent through a baghouse prior to discharging to the atmosphere.

The product fly ash trucks will travel on paved roads within the Big Bend Station and then exit the plant for delivery to offsite customers. Fugitive particulate matter (PM)/PM_{10} emissions associated with product fly ash truck traffic on Big Bend Station paved roads will be controlled by periodic watering on an as-needed basis.

PROJECT EMISSION RATES

Emissions associated with the project include PM_{10} due to fly ash handling and storage, combustion by-products (i.e., NO_x, CO, SO_2, VOC, and PM_{10}) due to combustion of feed fly ash in the FBC, PM and PM_{10} due to truck traffic, and pollutants caused by use of startup distillate fuel oil. Estimated emission rate changes are provided in the tables below. Each of these emission areas is discussed in the following sections. Also, please refer to the attached Table 1., Big Bend Units 3 & 4 and CBO PSD Emission Evaluation for netting calculations.

Estimated potential emissions increase from the FBC are:

Pollutant	Estimated tpy*
NO_x	362.0
CO	46
SO_2	16.5
VOC	6.6
PM_{10}	6.5

*Vendor estimate

Estimated potential PM_{10} emissions due to fly ash handling and storage: 16.4 tpy.

Estimated potential PM emissions due to truck traffic: 0.777 tpy.

Estimated potential PM_{10} emissions due to truck traffic: 0.152 tpy.

Startup distillate fuel oil potential emissions are as follows:

Pollutant	Estimated tpy*
NO_x	0.14
CO	0.04
VOC	0.0014
SO_2	0.025
PM	0.0014
PM_{10}	0.0014
Pb	0.0000090

*AP-42 use estimate

MATERIAL HANDLING AND STORAGE EMISSIONS

The CBO process will include five PM_{10} emission points associated with material handling and storage activities. These emission points include feed fly ash silo, feed fly ash storage dome, product fly ash storage dome, product fly ash truck load-out storage silo and truck loading operation, and fugitive emissions associated with product fly ash truck traffic on paved Big Bend Station roads.

The feed fly ash silo, feed and product fly ash storage domes, and product fly ash truck loadout silo will each be equipped with fabric filter baghouses designed to achieve an outlet PM_{10} concentration of no more than 0.020 grains per dry standard cubic foot (gr/dscf). These baghouses will employ Nomex™/Teflon™ filter bags and pulse jet cleaning. Design pressure drop for each baghouse is 6 inches of water. Baghouse air-to-cloth ratios are 3:1 (feed fly ash silo) and 4:1 (feed and product fly ash storage domes and product fly ash truck loadout silo). The truck loading operation will include a telescoping chute with local ventilation designed to capture the fugitive PM_{10} emissions that would otherwise occur in the absence of this collection equipment. The PM_{10} emissions captured during the truck loading process will be routed to the truck loadout silo. Fugitive PM_{10} emissions associated with product fly ash truck traffic on paved Big Bend Station roads will be minor due to relatively short travel distances. Potential PM_{10} emissions, based on the conservative premise of continuous operation, total 16.4 tons per year (tpy) for these emission sources.

The existing Big Bend Station fly ash handling and storage systems will remain in use. However, the existing fly ash truck loading equipment will not be used while the CBO process is operational.

COMBUSTION BY-PRODUCT EMISSIONS

The FBC combustion gases will contain combustion by-products including NO_x, CO, SO_2, PM_{10}, and VOCs. The FBC will utilize good combustion practices to minimize emissions of CO. Following product fly ash separation by the cold cyclone and fabric filter baghouse, this exhaust stream will be routed to the inlet of Units 3 and 4 FGD control system prior to discharging to the atmosphere through existing Units 3 and 4 stacks. Emission estimates for these combustion by-products, provided in the table above, were developed based on data provided by the CBO vendor, Progress Materials, Inc. (PMI).

Including the CBO return stream, the Units 3 and 4 FGD control system will continue to achieve the SO_2 removal rates required by the EPA Consent Decree and FDEP Consent Final Judgment. Units 3 and 4 shall also continue to comply with the PM emission limits required by the EPA Consent Decree and FDEP Consent Final Judgment. As noted above, reuse of the CBO process recovered energy will save fuel that would otherwise need to be consumed in Units 3 and 4.

The Big Bend Station NO_x pollution control projects, including the integral CBO process, are environmentally beneficial due to the substantial reductions in actual NO_x emissions that will occur following completion of these projects. (Please refer to the attached Table 1., Big Bend Units 3 & 4 and CBO PSD Emission Evaluation).

The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein), and all specific conditions of the facility's existing Title V Air Operation Permit Renewal No. 0570039-017-AV.

PRELIMINARY DETERMINATION

Based on the foregoing technical evaluation of the application and other available information, the Department has made a determination that the proposed project will comply with all applicable state and federal air pollution regulations. The Department will issue a Draft Air Construction Permit to the applicant that provides for the above changes at the facility.

Big Bend Units 3 & 4 and CBO PSD Emission Evaluation

Historic Heat Input Values Based on CEMS Data

	BB3	BB4
2004	24,458,761	31,531,089
2005	20,358,762	30,356,932
Average	22,408,762	30,944,011

Big Bend Unit 3

Parameter	BB3 Baseline Actual Annual Emissions (tons)[1]				BB3 Calculated Future Actual Annual Emissions (tons)	
	2004	2005	Average	Source	Calculated Future Actuals	Basis
NOx	6,506	5,232	5,869	CEMS	1,345	(0.12 lb/MMBtu emission rate)*(2004-5 HI)/2000
SO2	2,697	2,355	2,526	CEMS	2,465	(0.22 lb/MMBtu emission rate)*(2004-5 HI)/2000
CO	2446	2036	2,241	Estimate (eng. study)	2,241	(0.2 lb/MMBtu emission rate)*(2004-5 HI)/2000
VOC	21	18	19	Estimate (AP-42)	19	(0.0017 lb/MMBtu emission rate)*(2004-5 HI)/2000
PM	194	162	178	Stack Test/AOR	178	(0.0159 lb/MMBtu emission rate)*(2004-5 HI)/2000

Big Bend Unit 4

Parameter	BB4 Baseline Actual Annual Emissions (tons)[1]				BB4 Calculated Future Actual Annual Emissions (tons)	
	2004	2005	Average	Source	Calculated Future Actuals	Basis
NOx	3,516	3,081	3,298	CEMS	1,547	(0.10 lb/MMBtu emission rate)*(2004-5 HI)/2000
SO2	3,477	3,511	3,494	CEMS	3,404	(0.22 lb/MMBtu emission rate)*(2004-5 HI)/2000
CO	457	440	449	Estimate/Permit Limit	449	(0.029 lb/MMBtu emission rate)*(2004-5 HI)/2000
VOC	41	40	40	Estimate (AP-42)	40	(0.0026 lb/MMBtu emission rate)*(2004-5 HI)/2000
PM	67	65	66	Stack Test/AOR	66	(0.0159 lb/MMBtu emission rate)*(2004-5 HI)/2000

Big Bend CBO

Parameter	CBO Baseline Actual Annual Emissions (tons)				CBO Calculated Future Actual Annual Emissions (tons)	
	2004	2005	Average	Source	Calculated Future Actuals	Basis
NOx	0	0	0	Not in operation	362	See CBO Permit Application
SO2	0	0	0	Not in operation	16.5	See CBO Permit Application
CO	0	0	0	Not in operation	46	See CBO Permit Application[2]
VOC	0	0	0	Not in operation	6.6	See CBO Permit Application
PM_{10}	0	0	0	Not in operation	6.5	See CBO Permit Application

Combined Emissions - Big Bend CBO, Unit 3, & Unit 4

Parameter	Baseline Actual Emissions[1] (tons)	Calculated Future Actual Emissions[2] (tons)	Emissions Increase or (Reduction)[3] (tons)	PSD Significance Level (tons)
NOx	9,168	3,254	(5,914)	40
SO2	6,020	5,885	(135)	40
CO	2690	2736	46	100
VOC	60	66	6	40
PM_{10}	244	251	8	15

Notes:

1. 2004-2005 emissions are selected as the baseline actual emissions
2. The CBO CO value is revised from the application due to a higher heat recovery emissions offset value because of revised future CO emissions from Units 3 & 4
3. BB Unit 4 CO increase is based on 0.029 lb/MMBtu permit limit. TEC will request a higher CO limit based on effect of Consent Decree Early NOx Reduction Projects

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

DRAFT AIR CONSTRUCTION PERMIT NO. 0570039-023-AC

PERMITTEE

Tampa Electric Company (TEC)	File/Permit No.	**0570039-023-AC**
Big Bend Station	Facility ID:	0570039
Post Office Box 111	Project:	Carbon Burn-out (CBO) Process
Tampa, Florida 33601-0111		Steam Generator Unit 3
		Steam Generator Unit 4
	SIC No.	4911
Authorized Representative:	Expires:	December 31, 2008
Karen Sheffield, General Manager	County	Hillsborough

PROJECT AND LOCATION

This is an Air Construction Permit for the installation of a carbon burn-out (CBO) process at the facility. This process includes a CBO fluidized bed combustor that will be integrated into Steam Generator Units 3 and 4 as well as ancillary fly ash handling equipment. The CBO process is necessary to make the fly ash resulting from the Consent Final Judgment and a Consent Decree more marketable. The air construction permit will also establish this specific project as applicable Title V Operation Permit conditions.

The TEC Big Bend Station is located at Wyandotte Road, Apollo Beach, Hillsborough County. UTM Coordinates are Zone 17, 361.9 km East and 3075.0 km North; Latitude: 27° 47' 36" North and Longitude: 82° 24' 11" West.

STATEMENT OF BASIS

This Air 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 above named permittee is authorized to install the CBO process at the facility 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 of Environmental Protection (Department).

THE ATTACHED APPENDIX IS MADE A PART OF THIS PERMIT:

Appendix GC Construction Permit General Conditions

Michael G. Cooke, Director
Division of Air Resource Management

MGC/tbc

FACILITY DESCRIPTION

This facility consists primarily of four existing fossil fuel steam generators (boilers) and three simple-cycle combustion turbines. Emissions from all steam generators are controlled by electrostatic precipitators (ESPs), and flue gas desulfurization (FGD) systems. In addition, there are ongoing nitrogen oxides (NO_x) control projects utilizing selective catalytic reduction (SCR) systems currently being implemented pursuant to the Consent Final Judgment between TEC and the Department and a Consent Decree between TEC and the United States Environmental Protection Agency (EPA) as noted above.

EMISSIONS UNITS

This permit addresses the modification and/or installation of the following equipment:

Emission Unit No.	System	Emission Unit / Equipment Description
003	Power Generation	445 MW Fossil Fuel Steam Generator (installation of the Carbon Burn-Out Fluidized Bed Combustor is considered a modification to Emission Unit Nos. 3 and 4)
004	Power Generation	486 MW Fossil Fuel Steam Generator (installation of the Carbon Burn-Out Fluidized Bed Combustor is considered a modification to Emission Unit Nos. 3 and 4)
040	Fly Ash Handling	CBO Feed Fly Ash Silo
041	Fly Ash Handling	CBO Feed Fly Ash Storage Dome
042	Fly Ash Handling	CBO Product Fly Ash Storage Dome
043	Fly Ash Handling	CBO Product Fly Ash Truck Loadout Storage Silo and Truck Loading
044	Fly Ash Handling	CBO Product Fly Ash Truck Fugitives

REGULATORY CLASSIFICATION AND BACKGROUND

Because potential emissions of at least one regulated pollutant exceed 100 tons per year, the existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC). The existing facility is major source of hazardous air pollutants (HAPs). The facility operates emissions units subject to the Acid Rain Program provisions of the federal Clean Air Act (Title IV).

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., Prevention of Significant Deterioration (PSD) of Air Quality. Unit 4 was certified pursuant Electrical Power Plant Siting in accordance with Chapter 62-17, F.A.C. and Chapter 403, Part II, F.S. This facility is classified as a "Major Source of Air Pollution or Title V Source" due to emissions of at least one regulated air pollutant, such as sulfur dioxide, that exceeds 100 tons per year.

In a letter dated January 20, 2006, EPA Region 4 reported their determination that the fluidized bed combustor within the CBO project can be viewed as a physical change of the existing Big Bend Units 3 and 4, and that new source review (NSR) applicability can be assessed using current Florida rules that allow comparison of actual annual emissions prior to the change with representative actual emissions after the change. Further, actual emissions from Units 3 and 4 prior to development of the CBO project can be based on total emissions from Units 3 and 4 within a recent two-year period without any adjustments that take into account the Consent Decree between the federal government and the Tampa Electric Company.

The applicant escaped prevention of significant deterioration (PSD) review for the current air construction permit. (Please refer to the attached Table 1., Big Bend Units 3 & 4 and CBO PSD Emission Evaluation). Because the projected net increases in actual emissions for the pollutants are below the significant emissions rates listed in Rule 62-210.200(242), F.A.C., Definitions – Significant Emissions Rates, it has been determined by the Department that this change constitutes a minor modification to the facility. Therefore, this permit modification is not subject to review under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), so neither a revised Best Available Control Technology (BACT) determination, nor an analysis of the air quality impact is required. The proposed project is otherwise subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein), and all specific conditions of the facility's existing Title V Air Operation Permit Renewal No. 0570039-017-AV.

PERMIT SCHEDULE

- Notice of Intent to Issue Draft Permit published.
- Intent to Issue Draft Permit distributed.
- January 25, 2006 Response from Applicant received and Application deemed complete.
- September 2, 2005 Request for additional information letter sent.
- August 10, 2005 Application received.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action, but not all are incorporated into this permit. These documents are on file with the Department.

- Air construction permit application received on August 10, 2005.
- Response letters from TEC to Departmental requests for additional information.
- The Department's Technical Evaluation and Preliminary Determination, issued concurrently with this draft air construction permit.
- Letter from EPA Region 4 dated January 20, 2006.
- Title V Air Operation Permit Renewal No. 0570039-017-AV.
- EPA Consent Decree (U.S. vs. TEC) dated February 29, 2000, amended October 4, 2000.
- FDEP Consent Final Judgment (DEP vs. TEC) dated December 6, 1999.

PROJECT DESCRIPTION

As noted above, the Tampa Electric Company has entered into agreements with EPA and FDEP concerning the installation of additional air pollution control systems at the Big Bend Station. These agreements included requirements to install additional systems for NO_x control on Units 1 through 4. In response to these requirements, the Tampa Electric Company determined that the installation of combustion modifications and SCR systems are the technologies to be used to reduce NO_x emissions from these units. Via prior permitting actions, the Department issued air construction permits to implement these changes at the facility. However, installation of these systems to effect NO_x reductions will necessarily impact the Tampa Electric Company's current beneficial reuse of its fly ash at the Big Bend Station.

Combustion by-product fly ash generated at Units 1 through 4 is presently transferred offsite and used as a raw material in the production of Portland cement or as a substitute for Portland cement in the production of concrete. The current and planned NO_x control systems for Units 1 through 4 will increase the fly ash carbon and ammonia concentrations to levels that will render the fly ash unusable as a Portland cement raw material or substitute. The Big Bend Station generates approximately 280,000 tons of fly ash per year as a result of its operations. If the fly ash cannot be used for those purposes, this could potentially result in the landfill disposal of the material.

In addition to reducing NO_x to molecular nitrogen, the SCR control systems will unavoidably increase boiler flue gas sulfur trioxide (SO_3) concentrations due to the oxidation of sulfur dioxide (SO_2) to SO_3 by the SCR catalyst. SO_3 vapor will subsequently condense to form sulfuric acid mist aerosol as the flue gas temperature is reduced in the inlet to the wet flue gas desulfurization (FGD) control system. Sulfuric acid mist aerosol is not efficiently removed by wet FGD control systems. To avoid corrosion downstream of the ductwork and ESP internals, and avoid potential plume opacity problems, ammonia injection systems will be installed to mitigate the environmental impacts of SO_3 formation by the SCR control systems. The ammonia injection systems will further increase the fly ash ammonia concentration to levels that are well above the maximum concentration (i.e., 50 parts per million) required for recycling the fly ash as a Portland cement raw material or substitute.

The SCR and the control measures to mitigate SO_3 formation will alter the quality of the fly ash so that it cannot be recycled in the current manner. This technology will be installed to produce a low-carbon, low-ammonia, fly ash material suitable for reuse in cement and concrete production. The technology will also recover a significant portion of the energy contained in the high-carbon fly ash for beneficial use at the facility. Thus, it is expected that the heat recovered from the process will displace the energy derived from solid fuels that would otherwise be burned in Units 3 and 4, resulting in a fuel savings and corresponding reduction in air emissions.

The permittee shall conduct initial and annual sampling for NO_x and CO of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct in accordance with the requirements of Rule 62-297.310(7)(a)4.b., F.A.C. Testing of mercury (Hg) is also required by this permit; the permittee shall conduct initial and annual sampling for Hg emissions of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct. The existing SO_2 CEMS located downstream of Units 3 and 4 FGD shall be used to monitor SO_2 emissions from Units 3 and 4 and the CBO return. Consistent with current testing requirements, initial and annual sampling for particulate matter (PM) shall also be conducted downstream of Units 3 and 4 FGD to measure PM from Units 3 and 4 and the CBO return.

PROCESS DESCRIPTION

CBO technology is a proprietary, patented, environmentally beneficial technology whose primary function is the production of low-carbon, low-ammonia fly ash material suitable for commercial use as a Portland cement raw material or substitute. Major components of the process planned for the Big Bend Station include a feed fly ash silo, feed and product fly ash storage domes, fluidized bed combustor (FBC), hot cyclones for fly ash recycle to the FBC, heat recovery heat exchanger, cold cyclone and fabric filter baghouse for product fly ash recovery, and product fly ash truck loading.

Fly ash from Units 1 through 4 electrostatic precipitators (ESPs) will be conveyed pneumatically to the feed fly ash silo or feed fly ash storage dome. The ESPs are located downstream of the SCR and SO_3 air emission control systems and therefore will collect high-carbon, ammoniated fly ash from Units 1 through 4 combustion gas streams. The feed fly ash silo will vent through a baghouse prior to discharging to the atmosphere. The feed fly ash storage dome will also vent through a baghouse prior to discharging to the atmosphere.

Fly ash from the feed silo will then be fed to the FBC for oxidation of carbon contained in the fly ash to carbon dioxide. The high temperature FBC process will also reduce fly ash ammonia compounds to molecular nitrogen (N_2) and water. The CBO technology does not require any auxiliary fuel to operate, with the exception of a minimal amount of startup fuel to initiate the combustion process. As with any fossil fuel combustion process, the FBC combustion gases will also contain combustion by-products including NO_x, carbon monoxide (CO), SO_2, particulate matter less than or equal to 10 micrometers (PM_{10}), and volatile organic compounds (VOCs). The CBO process includes a forced draft fan to provide fluidization and combustion air to the FBC. An induced draft fan maintains the FBC freeboard pressure slightly below atmospheric pressure.

The FBC exhaust stream will be routed through hot cyclones to capture fly ash entrained in the FBC exhaust stream. Fly ash captured by the hot cyclones is returned to the FBC. The hot cyclones exhaust and FBC low carbon product ash streams are combined and sent to the gas/product cooler heat exchanger for heat recovery. Thermal energy recovered from the process will be used to heat condensate from the Units 3 and/or 4 low-pressure feedwater systems. Unit 3 will be the primary recipient of the recovered process energy; Unit 4 will be used during periods when Unit 3 is not available. Reuse of the process recovered energy saves fuel that would otherwise need to be burned in Units 3 and 4. This will result in less coal being consumed per Unit of electric output, with corresponding reductions in air pollutant emissions. The improvement in Unit 3 and Unit 4 heat rate, due to the use of recovered energy from the process, represents recovery of a portion of the efficiency lost when combustion controls were installed for NO_x reduction purposes. Lower combustion efficiency is a consequence of the lower flame temperatures and lower oxygen available in the combustion zone which is necessary to reduce NO_x emissions. This is the reason for the increase in fly ash carbon content.

Following heat recovery, the cooled FBC combustion gases, containing entrained product fly ash, will be routed through a cold cyclone and fabric filter baghouse for product fly ash separation. The exhaust from the fabric filter baghouse (i.e., the CBO return) will be routed to the inlet of Units 3 and 4 flue gas desulfurization (FGD) emission control system and subsequently discharged to the atmosphere through the existing Units 3 and 4 stacks.

Product fly ash separated by the cold cyclone and fabric filter baghouse will be sent to a surge bin. A portion of the cooled, low-carbon product will be recycled to the FBC for temperature control. The remaining product ash is then conveyed pneumatically to the product fly ash storage dome or directly to the truck loadout silo. The product fly ash storage dome will vent through a baghouse prior to discharging to the atmosphere. The feed and product fly ash storage domes will be used to provide flexibility in

product fly ash marketing. Product fly ash will be conveyed to the truck loadout silo for subsequent transfer to trucks for shipment to offsite customers. The PM_{10} emissions captured during the truck loading process will be routed to the truck loadout silo which will vent through a baghouse prior to discharging to the atmosphere.

The product fly ash trucks will travel on paved roads within the Big Bend Station and then exit the plant for delivery to offsite customers. Fugitive particulate matter (PM)/PM_{10} emissions associated with product fly ash truck traffic on Big Bend Station paved roads will be controlled by periodic watering on an as-needed basis. The existing Big Bend Station fly ash handling and storage systems will remain in use. However, the existing fly ash truck loading equipment will not be used while the CBO process is operational.

PROJECT SCHEDULE

Emissions Unit ID Numbers	Estimated start date	Estimated completion date
003	June 1, 2006	December 1, 2007
004	June 1, 2006	December 1, 2007
040	June 1, 2006	December 1, 2007
041	June 1, 2006	June 1, 2007
042	June 1, 2006	December 1, 2007
043	June 1, 2006	December 1, 2007
044	June 1, 2006	December 1, 2007

The fly ash CBO project will process fly ash from each of the four Big Bend Station Units following installation of an SCR control system on each unit. Accordingly, construction of the CBO project should commence with adequate lead time in order to be operational prior to completion of the first Big Bend Station SCR installation on Unit 4 (estimated as June 1, 2007).

ADMINISTRATIVE REQUIREMENTS

A.1. Regulating Agencies. All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation, Florida Department of Environmental Protection, at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and phone number (850) 488-0114. All documents related to reports, tests, and notifications should be submitted to the Environmental Protection Commission of Hillsborough County, and copies of those submittals shall be sent to the Department of Environmental Protection, Southwest District Office.

Addresses and telephone numbers are:

Environmental Protection Commission of Hillsborough County
Roger P. Stewart Center
3629 Queen Palm Drive
Tampa, Florida 33619
Telephone: 813/627-2600; Fax: 813/627-2660

Department of Environmental Protection
Southwest District Office, Air Resources Section
13051 N Telecom Parkway
Temple Terrace, FL 33637-0926
Telephone: 813/632-7600; Fax: 813/632-7665

A.2. General Conditions. The owner and operator is subject to, and shall operate under the attached General Permit Conditions **G.1.** through **G.15.** listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes.
[Rule 62-4.160, F.A.C.]

A.3. Terminology. The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code (F.A.C.).

A.4. Forms and Application Procedures. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C.
[Rule 62-210.900, F.A.C.]

A.5. Modifications. The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.
[Chapters 62-210 and 62-212, F.A.C.]

A.6. 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.]

A.7. Permit Extension. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit.
[Rule 62-4.080, F.A.C.]

APPLICABLE STANDARDS AND REGULATIONS

A.8. Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) 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 Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297.

A.9. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations.
[Rule 62-210.300, F.A.C.]

A.10. The facility is subject to all of the requirements specified in Title V Air Operation Permit Renewal No. 0570039-017-AV.

A.11. An application for a Title V Air Operation Permit Revision, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Bureau of Air Regulation to incorporate the specific conditions of this Air Construction Permit.
[Chapter 62-213, F.A.C.]

GENERAL OPERATION REQUIREMENTS

A.12. Unconfined Particulate Emissions. During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary.
[Rule 62-296.320(4)(c)., F.A.C.]

A.13. Plant Operation – Problems. If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Environmental Protection Commission of Hillsborough County as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.
[Rule 62-4.130, F.A.C.]

A.14. Operating Procedures. Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.
[Rule 62-4.070(3), F.A.C.]

A.15. Circumvention. The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. There requirements also hold for the operation of the CBO technology.
[Rules 62-210.650, F.A.C.]

CONTROL TECHNOLOGY

A.16. At all times except during startups, shutdowns, and/or malfunctions, the CBO FBC exhaust gases shall be directed to the Unit Nos. 3 and 4 flue gas desulfurization (FGD) system.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A17. At all times, the CBO Feed Fly Ash Silo exhaust gases shall be directed to the CBO Feed Fly Ash Silo Dust Collector.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.18. At all times, the CBO Feed Fly Ash Storage Dome exhaust gases shall be directed to the CBO Feed Fly Ash Storage Dome Dust Collector.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.19. At all times, the CBO Product Fly Ash Storage Dome exhaust gases shall be directed to the CBO Product Fly Ash Storage Dome Dust Collector.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.20. At all times, the CBO Product Fly Ash Truck Loadout Storage Silo and Truck Loading exhaust gases shall be directed to the CBO Product Fly Ash Truck Loadout Dust Collector.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

EMISSION LIMITS AND STANDARDS

A.21. After April 30, 2008, NO_x emissions (reported as NO_2) from Unit No. 3 when combusting solid fuel, shall not exceed 0.12 lb NO_x/million Btu heat input on a heat input weighted 30 day rolling average basis. Based upon a maximum heat input of 4115 million Btu/hour, NO_x emissions shall not exceed 494

lb/hr. These emission limits are based on the definition of "emission rate" so that an equation is used that divides total pounds of NO_x by total heat input in each 30-day period to reach a 30-day rolling average. These limits shall not apply for periods when the CBO exhaust is routed to the Unit 3 boiler exhaust. During periods when the CBO exhaust is routed to the Unit 3 boiler exhaust, the NO_x limit affecting Unit 3 is 0.15 lb NOx /million Btu heat input on a heat input weighted 30 day rolling average basis.
Note: This specific condition is based on an interim position and it will be modified when the Consent Decree discussions between TEC and EPA have been completed if needed.
[0570039-022-AC, Specific Condition A.16.; and Applicant request.]

A.22. After May 31, 2007, NO_x emissions (reported as NO_2) from Unit No. 4 when combusting bituminous or anthracite coal, or a coal/petroleum coke blend, shall not exceed 0.10 lb/million Btu heat input. And, based upon a heat input limit of 4330 million Btu/hour, NO_x emissions shall not exceed 433 lb/hr. These emission limits are based on a 30-day rolling average.
[0570039-020-AC, Specific Condition A.16.]

A.23. Particulate matter (PM) emissions from the CBO Feed Fly Ash Silo Dust Collector shall not exceed 0.020 grains per dry standard cubic foot (dscf) of exhaust gas, and not exceed 0.4 lb per hour.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.24. PM emissions from the CBO Feed Fly Ash Storage Dome Dust Collector shall not exceed 0.020 grains/dscf of exhaust gas, and not exceed 1.1 lb per hour.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.25. PM emissions from the CBO Product Fly Ash Storage Dome Dust Collector shall not exceed 0.020 grains/dscf of exhaust gas, and not exceed 1.1 lb per hour.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.26. PM emissions from the CBO Product Fly Ash Truck Loadout Dust Collector shall not exceed 0.020 grains/dscf of exhaust gas, and not exceed 1.1 lb per hour.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.27. Specific Conditions **A.28.** through **A.33.**, below, apply to the new Feed Fly Ash Silo, Feed Fly Ash Storage Dome, Product Fly Ash Storage Dome, and Product Fly Ash Truck Loadout Storage Silo and Truck Loading emission units.

A.28. Particulate Matter Emissions. Particulate matter emissions from each silo and dome baghouse shall not exceed 0.020 grains per dry standard cubic foot (gr/dscf).
[Applicant request; and Rule 62-4.070(3), F.A.C.]

A.29. Visible Emissions. Visible emissions from each of the silos and domes shall not exceed 5% opacity for these minor sources equipped with a baghouse.
[Rule 62-297.620(4), F.A.C.]

A.30. Annual Tests Required. Annual visible emissions compliance tests shall be performed for each emissions unit.
[Rule 62-297.310(7), F.A.C.]

A.31. Visible Emissions. The test method for visible emissions shall be EPA Method 9, adopted and incorporated in Rule 62-204.800, F.A.C.
[Rule 62-4.070(3), F.A.C.]

A.32. Particulate Matter Emissions. The test method for particulate matter emissions for all units shall be EPA Method 5, adopted and incorporated in Rule 62-204.800, F.A.C.
[Rule 62-4.070(3), F.A.C.]

A.33. Particulate Matter Emissions. In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Department waives any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specifies an alternative standard of 5% opacity. If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Rule 62-297.620(4), F.A.C]

SPECIFIC OPERATION REQUIREMENTS

A.34. Except during periods of startup, shutdown, and malfunction, the CBO FBC shall not be operated unless heated condensate is being returned from the CBO FBC gas/product cooler to either Unit No. 3 or Unit No. 4.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.35. For each hour of operation of the CBO FBC, the rate of heat transfer in Btu per hour from the CBO FBC system to Unit No. 3 or Unit No. 4 shall be recorded. The monitoring system shall provide a continuous indication of the condensate flow rate (in pounds per hour) through the CBO system and shall provide a continuous record of which boiler (either Unit No. 3 or Unit No. 4) is receiving the heat generated by the CBO system.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.36. The CBO FBC shall be operated in compliance with the requirements of 40 CFR 60, Subpart Dc. The emissions limits in Subpart Dc that apply to coal combustion do not apply to this system because the high-carbon fly ash does not meet the ASTM definition of "coal."
[40 CFR 60 Subpart Dc; Applicant Request.]

TESTING AND COMPLIANCE DETERMINATION

A.37. The permittee shall conduct initial and annual sampling for NO_x and CO of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct in accordance with the requirements of Rule 62-297.310(7)(a)4.b., F.A.C. The existing SO_2 CEMS located downstream of Units 3 and 4 FGD will be used to monitor SO_2 emissions from Units 3 and 4 and the CBO return. Consistent with current testing requirements, initial and annual of sampling for particulate matter (PM) will also be conducted downstream of Units 3 and 4 FGD to measure PM from Units 3 and 4 and the CBO return.
[Applicant request; and Rule 62-4.070(3), F.A.C.]

A.38. Nitrogen oxides emissions shall be continuously monitored to confirm compliance, using the Units' existing continuous emissions monitoring systems (CEMS), and an additional NO_x CEMS installed downstream of the CBO. All CEMS shall be installed, operated, and maintained using the specifications of the appropriate specific conditions of the facility's Title V Air Operation Permit. Compliance is determined by calculating the heat input weighted average of all hourly emission rates for NO_X for the 30 successive boiler operating days, except for data obtained during startup, shutdown, malfunction, or abnormal events.
[Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.46a(g), and 0570039-017-AV]

A.39. Carbon monoxide (CO) emissions from Unit No. 4 shall not exceed 0.029 lb/million Btu heat input, and shall not exceed 124 lb/hr.
[0570039-017-AV, Specific Condition B.10.]

A.40. Carbon Monoxide. Compliance with Specific Condition **A.39.** shall be demonstrated using EPA Method 10 in accordance with Chapter 62-297, F.A.C. A formal compliance test shall be conducted annually.
[Rules 62-213.440, 62-297.310(7), and 62-297.401, F.A.C.]

A.41. Performance testing shall be performed in order to determine the NO_x emission rate from the CBO FBC within 180 days after initial startup. The test method shall be EPA Methods 7 or 7E, incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.42. During the performance testing for NO_x emissions as required by Specific Condition **A.21.**, the heat input to the CBO shall be monitored and recorded. The measured NO_x emission rate and heat input rate shall be used to calculate a unit-specific NO_x emission factor expressed in lb/million Btu heat input.
[Applicant Request; and Rule 62-4.070(3), F.A.C.]

A.43. The permittee shall conduct initial and annual sampling for mercury (Hg) emissions of the CBO return prior to entering the common Units 3 and 4 FGD inlet duct using EPA Test Method 324 (Appendix K to Part 75—Quality Assurance and Operating Procedures for Sorbent Trap Monitoring Systems).
[Rule 62-4.070(3), F.A.C.]

A.44. Compliance with the allowable emission limiting standards specified in this Air Construction Permit shall be determined within 180 days after initial startup, and annually thereafter, using the appropriate specific conditions of the facility's existing Title V Air Operations Permit No. 0570039-017-AV, by using the appropriate EPA reference test methods, or Department test methods.
[0570039-017-AV; and Rules 62-204.220 and 62-4.070(3), F.A.C.]

A45. Test Results. Compliance test results shall be submitted to the Environmental Protection Commission of Hillsborough County and the Department no later than 45 days after completion of the last test run.
[Rule 62-297.310(8), F.A.C.]

NOTIFICATION, REPORTING, AND RECORDKEEPING

A.46. Emission Compliance Stack Test Reports. A test report indicating the results of the required compliance tests shall be filed as per Specific Condition **A.22.** The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the compliance authority to determine if the test was properly conducted and if the test results were properly computed.
[Rule 62-297.310(8), F.A.C.]

A.47. Reporting and Recordkeeping.

1. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies 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, or for a period of 10 years following resumption of regular operations if the change increases the design capacity of that emissions unit or its potential to emit that PSD pollutant. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.
2. The permittee shall report to the Department within 60 days after the end of each year during which records must be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:
a. The name, address and telephone number of the owner or operator of the major stationary source;
b. The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
c. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
d. Any other information that the owner or operator wishes to include in the report.

3. 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.
[Rule 62-212.300(1)(e), F.A.C.]

COMPLIANCE ASSURANCE

A.48. Compliance Assurance Monitoring (CAM). The permittee shall evaluate the applicability of CAM to the CBO and, if applicable, submit a CAM plan as a revision to the facility's current Title V air operation permit.
[40 CFR 64; and Rule 62-204.800, F.A.C.]

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
   a. Have access to and copy and records that must be kept under the conditions of the permit;
   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
   a. A description of and cause of non-compliance; and
   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (NA);
    b. Determination of Prevention of Significant Deterioration (NA); and
    c. Compliance with New Source Performance Standards (NA).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        1) The date, exact place, and time of sampling or measurements;
        2) The person responsible for performing the sampling or measurements;
        3) The dates analyses were performed;
        4) The person responsible for performing the analyses;
        5) The analytical techniques or methods used; and
        6) The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

P.E. Certification Statement

Permittee:
Tampa Electric Company
Big Bend Station

Permit No.: 0570039-023-AC

Project Type: Air Construction Permit
Fly Ash Carbon Burn-out (CBO™) Project on Unit Nos. 3 and 4

I HEREBY CERTIFY *that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).*

Scott M. Sheplak, P.E. Date
Registration Number: 48866

Permitting Authority:
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/921-9532
Fax: 850/921-9533

SMS/TBC/AAL

Friday, Barbara

From: Exchange Administrator
Sent: Monday, April 24, 2006 12:44 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT444409.txt; DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station


ATT444409.txt
(284 B)


DRAFT AC Permit
No.: 0570039-0...

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

tdavis@ectinc.com

Friday, Barbara

From: Exchange Administrator
Sent: Monday, April 24, 2006 12:44 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT444424.txt; DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station


ATT444424.txt
(373 B)


DRAFT AC Permit
No.: 0570039-0...

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dmlukcic@tecoenergy.com
sscastro@tecoenergy.com

Friday, Barbara

From: Nasca, Mara
To: Friday, Barbara
Sent: Monday, April 24, 2006 12:44 PM
Subject: Read: DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station

Your message

To:	'tdavis@ectinc.com'; 'Harman, Alice'; Nasca, Mara; 'lloyd.david@epa.gov'; Oven, Hamilton; 'dmlukcic@tecoenergy.com'; 'sscastro@tecoenergy.com'
Cc:	Cascio, Tom
Subject:	DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station
Sent:	4/24/2006 12:43 PM

was read on 4/24/2006 12:44 PM.

Friday, Barbara

From: Exchange Administrator
Sent: Monday, April 24, 2006 12:44 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

Attachments: ATT444442.txt; DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station


ATT444442.txt
(283 B)


DRAFT AC Permit
No.: 0570039-0...

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Harman@epchc.org

Friday, Barbara

From: Oven, Hamilton
To: Friday, Barbara
Sent: Monday, April 24, 2006 12:48 PM
Subject: Read: DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station

Your message

To:	'tdavis@ectinc.com'; 'Harman, Alice'; Nasca, Mara; 'lloyd.david@epa.gov'; Oven, Hamilton; 'dmlukcic@tecoenergy.com'; 'sscastro@tecoenergy.com'
Cc:	Cascio, Tom
Subject:	DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station
Sent:	4/24/2006 12:43 PM

was read on 4/24/2006 12:48 PM.

Friday, Barbara

From: System Administrator
To: lloyd.david@epa.gov
Sent: Monday, April 24, 2006 12:52 PM
Subject: Delivered:DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station

Your message

To: Unknown
Subject: DRAFT AC Permit No.: 0570039-023-AC - TECO - Big Bend Station
Sent: 4/24/2006 12:47 PM

was delivered to the following recipient(s):

lloyd.david@epa.gov on 4/24/2006 12:47 PM

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