

# Department of Environmental Protection

Jeb Bush

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

Colleen M. Castille Secretary

#### NOTICE OF FINAL PERMIT

In the Matter of an Application for Permit by:

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

**Big Bend Station**Air Permit No. 0570039-020-AC

Enclosed is Final Air Construction Permit No. 0570039-020-AC. The air construction permit authorizes the installation of a selective catalytic reduction system for nitrogen oxides control on the solid fuel-fired Steam Generator Unit No. 4.

An electronic version of this document has 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

This permit is issued pursuant to Chapter 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

Trina L. Vielhauer, Chief Bureau of Air Regulation

Vina & Vulhams

# **CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this permit was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 5/6/05 to the person(s) listed:

Karen Sheffield\*
U.S. EPA, Region 4
Alice Harmon, Hillsborough County
Shelly Castro, Tampa Electric Company
Thomas W. Davis, Environmental Consulting & Technology, Inc.

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.

/ (Dat

(Date)

## FINAL DETERMINATION

# Tampa Electric Company Big Bend Station

Air Construction Permit No. **0570039-020-AC**Selective Catalytic Reduction

The Department distributed a public notice package on March 18, 2005, that included an Intent to Issue Air Construction Permit No. 0570039-020-AC to the Tampa Electric Company (TEC) for the Big Bend Station, located at Wyandotte Road, Apollo Beach, Hillsborough County. The air construction permit authorizes the applicant to install a selective catalytic reduction system for nitrogen oxides control on the solid fuel-fired Steam Generator Unit No. 4.

The <u>Public Notice of Intent to Issue</u> was published in the Tampa Tribune on April 15, 2005.

#### COMMENTS/CHANGES

- A meeting was held on April 6, 2005, with representatives from TEC, the Department, and Hillsborough County wherein the County's comments concerning the air construction permit application were discussed. Questions raised by the County were responded to verbally by TEC representatives. Minutes were taken at the meeting by the County and are part of the Department's project file.
- Comments from the applicant on the draft air construction permit were received on April 5, 2005, via e-mail. The comments were primarily minor language changes and editorial recommendations. Some of these minor changes were adopted in the final air construction permit.
- No other comments were received by the Department from the public, U.S.EPA, Hillsborough County, or the applicant.

# CONCLUSION

The final action of the Department is to issue the permit with the minor changes as indicated above.



Jeb Bush Governor

# Department of Environmental Protection

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

Colleen M. Castille Secretary

## FINAL AIR CONSTRUCTION PERMIT NO. 0570039-020-AC

#### PERMITTEE

Tampa Electric Company (TEC)	File/Permit No.	0570039-020-AC	
Big Bend Station	Facility ID:	0570039	
Post Office Box 111	Project:	NO <sub>x</sub> Reduction (SCR)	
Tampa, Florida 33601-0111		Steam Generator Unit 4	
	SIC No.	4911	
Authorized Representative:	Expires:	December 31, 2007	
Karen Sheffield, General Manager	County	Hillsborough	

#### PROJECT AND LOCATION

This is an Air Construction Permit for the installation of a selective catalytic reduction system for nitrogen oxides control on the solid fuel-fired Steam Generator Unit No. 4. The reductions are part of an emissions reduction program required by a Consent Final Judgment with the Department and a Consent Decree with the United States Environmental Protection Agency. The air construction permit will also establish these specific projects as applicable Title V Operation Permit conditions.

The Tampa Electric Company (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 SCR system 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

D. God

#### 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. There are ongoing nitrogen oxides (NO<sub>X</sub>) control projects pursuant to a Consent Final Judgment (CFJ) between TEC and the Department and a Consent Decree (CD) between TEC and the United States Environmental Protection Agency (EPA).

#### **EMISSIONS UNITS**

This permit addresses the installation of an ammonia or urea injection system and catalyst at the following Unit:

Emission Unit No.	System	Emission Unit Description
004	Power Generation	486 MW Fossil Fuel Steam Generator

The proposed project is called selective catalytic reduction (SCR). Recent  $NO_X$  control projects on Unit 4 include: 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.

#### REGULATORY CLASSIFICATION

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>X</sub>), carbon monoxide (CO), or volatile organic compounds (VOC), exceed 100 tons per year (TPY).

The addition of SCR to Unit No. 4 reduces actual and allowable  $NO_X$  emissions. It has been determined by the Department that the project is classified as a Pollution Control Project, as defined in 40 CFR 52.21(b)32, and meets the requirements of Rule 62-212.400(2)(a)2., F.A.C., and 40 CFR 52.21(b)(2)(iii)(h). Therefore, the project is not a modification under Department regulations.

#### PERMIT SCHEDULE

- April 15, 2005 Notice of Intent to Issue Permit published.
- March 18, 2005 Intent to Issue Permit distributed.
- February 15, 2005 Application deemed complete.
- February 15, 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.

- Application received on February 15, 2005.
- The Department's Technical Evaluation and Preliminary Determination, issued concurrently with the draft air construction permit.
- Comments on the draft air construction permit from the applicant received on April 5, 2005.
- Minutes of a meeting held on April 6, 2005, with representatives from the Department, TEC, and Hillsborough County wherein the County's comments on the air construction permit application.
- 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.

- Title V Air Operation Permit Renewal No. 0570039-017-AV.
- Tampa Electric Submittals for PSC Docket 040750-EI.

#### PROJECT DESCRIPTION

TEC will install a SCR system for NO<sub>X</sub> control on the facility's Unit No. 4 coal-fired boiler. This emissions unit is a Combustion Engineering dry bottom, tangentially fired fossil fuel steam generator, with a generator nameplate rating of 486 megawatts (MW). The basic boiler startup and shutdown procedures will not need to be altered with the addition of the SCR (i.e., the existing Unit No. 4 boiler ramp rate is adequate for the SCR catalyst). The project consists of:

- Installation of a "two plus one" SCR reactor downstream of the economizer and upstream of the air preheater.
- Installation of an ammonia or urea storage, supply, and injection system the details of which are still under development.
- SCR tuning (i.e., adjustment of the ammonia or urea injection grid) during the initial commissioning of the system.
- Installation of a sulfur trioxide (SO<sub>3</sub>) control system such as alkali injection downstream of the Unit No. 4 air preheater.
- Assessment of combined effects of SCR and previous NO<sub>X</sub> and SO<sub>3</sub> control system projects upon fly ash marketability and development of treatment, reuse, or disposal options for the fly ash.

The project is much more involved than suggested by the brief description above. Following are additional details of the work likely to occur in association with the SCR installation:

- Demolition of existing flue gas ductwork as necessary to tie-in the SCR system
- Demolition of existing structural steel, modification and reinforcement of existing steel supports for a new duct from the existing steel
- Economizer bypass for gas temperature control
- Gas ductwork from economizer outlet to the SCR inlet (includes hoppers, mixers and turning vanes)
- SCR reactor (includes equipment for catalyst management) and catalyst
- Gas ductwork between the SCR & air heater
- Foundations for ductwork and structural steel
- Structural modifications for construction cranes
- Ammonia or Urea to ammonia conversion system
- Air heater modifications
- Electrical modifications
- Relocation of existing equipment and utilities
- Mobilization/demobilization
- Equipment rental
- Engineering construction management
- Asbestos removal
- Boiler and ESP reinforcement
- New Induced Draft ("ID") fans and motors
- ID fan foundations and electrical
- New and modified ductwork
- Auxiliary power and controls modifications

#### PROJECT SCHEDULE

Emissions Unit ID Number	Estimated start date	Estimated completion date
004	July 1, 2005	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

1410 North 21 Street Tampa, Florida 33605

Telephone: 813/272-5530; Fax: 813/272-5605

Department of Environmental Protection

Southwest District Office, Air Resources Section

3804 Coconut Palm Drive Tampa, Florida 33619-1352

Telephone: 813/744-6100; Fax: 813/744-6084

- **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.** <u>Terminology.</u> 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. <u>Permit Extension.</u> 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.10.1.** 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.11.** <u>Unconfined Particulate Emissions.</u> 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.12.** 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.13.** 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.14.** <u>Circumvention.</u> The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

## **CONTROL TECHNOLOGY**

A.15. The permittee shall install a selective catalytic reduction (SCR) system for nitrogen oxides ( $NO_X$ ) control on the facility's Unit No. 4 solid fuel-fired boiler.

[Applicant Request and EPA Consent Decree (U.S. vs. TEC) dated February 29, 2000, amended October 4, 2000, and FDEP Consent Final Judgment (DEP vs. TEC) dated December 6, 1999.]

## **EMISSION LIMITS AND STANDARDS**

**A.16.** 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. 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.

[Applicant Request and EPA Consent Decree (U.S. vs. TEC) dated February 29, 2000, amended October 4, 2000, and FDEP Consent Final Judgment (DEP vs. TEC) dated December 6, 1999.]

{Permitting Note: Limits in this condition are sufficient to also comply with requirements of: Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.44a(a); 40 CFR 60.4a(c); and PSD-FL-040]

**A.17.** Ammonia slip, measured at the stack downstream of all emissions control systems, shall not exceed 10 parts per million by volume (ppmv). Annual testing of ammonia slip shall be conducted, and corrective measures taken if measured values exceed 5 ppmv. [Applicant request; and Rule 62-4.070(3), F.A.C.]

## **COMPLIANCE DETERMINATION**

- **A.18.** Nitrogen oxides emissions shall be continuously monitored to confirm compliance, using the Unit's existing continuous emissions monitoring system (CEMS). Compliance is determined by calculating the arithmetic average of all hourly emission rates for NO<sub>X</sub> for the 30 successive boiler operating days, except for data obtained during startup, shutdown, or malfunction. [Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.46a(g), 0570039-017-AV]
- A.19. Compliance with the ammonia (NH<sub>3</sub>) slip limit shall be determined using EPA conditional test method (CTM-027), or other methods approved by the Department. [Rule 62-4.070(3), F.A.C.]
- **A.20.** Compliance with the allowable emission limiting standards specified in this Air Construction Permit shall be determined by May 31, 2007, 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.]
- **A.21.** Compliance with the additional 30-day NO<sub>X</sub> limit of 0.10 lb/mmBtu shall be demonstrated using CEMS data beginning July 1, 2007, and every 30 calendar or operating days thereafter. [0570039-017-AV.]
- A.22. <u>Test Results</u>. 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.23.** 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.]

## **COMPLIANCE ASSURANCE**

**A.24.** Compliance Assurance Monitoring (CAM). The permittee shall evaluate the applicability of CAM to Unit No. 4 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 and 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.

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APR 20 2005

April 19, 2005

BUREAU OF AIR REGULATION

Mr. Thomas Cascio, Florida Department of Environmental Protection 111 South Magnolia Drive, Suite 4 Tallahassee, Florida 32301 Via FedEx ... Airbill No. 7929 0079 4280

Re: Tampa Electric Company

**Big Bend Station Unit 4 Selective Catalytic Reduction** 

**Proof of Publication of the Intent to Issue** 

FDEP File No. 0570039-020-AC

Dear Mr. Cascio:

Pursuant to Rule 62-110.106(5), F.A.C., enclosed is the proof of publication of the Notice of Intent to Issue the Tampa Electric Company Big Bend Station Unit 4 Selective Catalytic Reduction Air Construction Permit. This notice was published in the legal section of the Tampa Tribune on Friday, April 15, 2005.

Thank you for your attention to this matter. If you have any concerns or questions feel free to contact me or Shelly Castro at (813) 228-4408.

Sincerely,

Byron T. Burrows Manager - Air Programs

Environmental, Health & Safety

EHS\rlk\SSC217

Enclosure

c/enc: Mr. Al Linero-FDEP

Mr. Sterlin Woodard-EPC
Ms. Alice Harman-EPC

## THE TAMPA TRIBUNE

# Published Daily Tampa, Hillsborough County, Florida

	ty personally appeared C. Pugh, who on oath says that she is the Advertising Billing newspaper published at Tampa in Hillsborough County, Florida; that the being a
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in the matter of	PUBLIC NOTICE OF INTENT
was published in said newspape	er in the issues of
	APRIL 15, 2005
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OFFICIAL NOTARY SEAL
SUSIE LEE SLATON
COMMISSION NUMBER
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MY COMMISSION EXP.
APRIL 16, 2009

#### PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570039-020-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 Tampa Electric Company (TEC) for the Big Bend Station located at Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County. The permit is for installation of a selective catalytic reduction (SCR) system on Steam Generators No. 4 for the reduction of omissions of nitrogen oxides (NOX). 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 applicant's mailing address is: Tampa Electric Company, P.O. Box 111, Tampa, Florida 33601-0111.

The SCR project is part of a larger program by TEC pursuant to a Consent Final Judgement (CFJ) with the Department and a Consent Decree (CD) with a Environmental Protection Agency to reduce emissions from its coal fired plants. There have been very substantial reductions of suffur dioxide (SO2) to-date primarily due to the installation of a scrubber on Units 1 and 2. Other NOx control projects including installation of Low NOx burners and separate overfire air were previously approved.

Previousy approved.

Previous projects have already reduced NOx emissions from Unit 4 from 0.40 pounds per million Btu of heat pump (lb/mmBtu) in 1998 to 0.22 lb/mmBtu in 2004. This air construction permit will establish the SCR project as an applicable requirement for subsequent incorporation into the facility Title V Operation Permit, For reference; the permit, will include a limit of 0.10 pounds of NOx per million Btu of heat input (lb/mmBtu) from Unit 4.

The new NOx emissions limit is much less than the other applicable limits of 0.44 lb/mmBtu and 0.60 lb/mmBtu for the same unit under the Federal Acid Rain Program and the applicable New Source Performance Standard. Further control of NOx will reduce, smog formation potential in the Tampa Bay area. SCR in combination with the existing scrubber in Unit 4 is also expected to

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.

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 provided to the provided to the Road, Mail Station #5505, Tallahassee, FL Stone Road, Mail Station
#5505, Tallahassee, FI
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 120.559 and 120.57 F.S., before the deadline for filling 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 C o m m o n w e a l t h 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 of filing. The failure of any person to file a petition within the appropriate time of filing. The failure of any 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'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 the name, address, and telephone number of the petitioner in 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 or proposed action; (d) A 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 specific rules or statutes the petitioner, stating precisely the action pretitioner wishes the agency to take with respect to the agency's proposed action; proposed action; proposed action proposed action with respect to the agency's proposed action; proposed action proposed action with respect to the agency's proposed action; proposed action proposed action proposed action with respect to the agency's proposed action; proposed action proposed action proposed action proposed action proposed action proposed action.

A petition that does not dispute the material facts upon which bepartment'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 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 Suite 4, 111 5. Magnona Drive Tallahassee, Florida, 32301 Telephone: 850/488-0114 Fax: 850/922 6979

Dept. of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida, 33619-8218 Telephone: 813/744-6100 Fax: 813/744-6084

Hillsborough County Environmental Protection Commission Air Management Division 1410 North 21 Street Tampa, Florida 33605 Telephone: 813/272-5530

Telephone: 813/272-5530
Telephone: 813/272-5530
Telephone: 813/272-5530
Telephone: 813/272-5530
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 vie we'd we'd we'd at: www.dep.state.fl. us, or call. ws/Air/permitting/construction.htm In the power plant category.

9173

04/15/05



# Department of Environmental Protection

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

Colleen M. Castille Secretary

March 18, 2005

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 Unit 4

DEP File No. 0570039-020-AC Selective Catalytic Reduction System

Dear Ms. Sheffield:

Enclosed are documents indicating the Department's intent to issue an air construction permit for installation of a selective catalytic reduction system on Unit 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 <u>Public Notice</u> 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. 0570039-020-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, South Permitting 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

Zin & Vilhaus

TLV/aal/tc

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

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. 0570039-020-AC Nitrogen Oxides Reduction Project Selective Catalytic Reduction Big Bend Station Unit No. 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 February 15, 2005 for an air construction permit to install a selective catalytic reduction (SCR) system for nitrogen oxides (NO<sub>x</sub>) control on the facility's Unit No. 4 coal-fired boiler. The project is part of a larger program by TEC pursuant to a Consent Final Judgment with the Department and a Consent Decree with the Environmental Protection Agency to reduce emissions from the coal fired plants. This air construction permit will also establish these specific projects as applicable requirements for subsequent incorporation into the facility Title V Operation Permit.

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

Tura & Vielhaun

#### 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 to the person(s) listed:

Karen Sheffield, General Manager, TEC Big Bend Station\*
Thomas Davis, P.E.
Shelly Castro, TEC
Alice Harman, EPCHC
Jason Waters, FDEP-SWD
Greg Worley, EPA Region 4

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.

(Date)

## PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

# STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570039-020-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 Tampa Electric Company (TEC) for the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County. This permit is for installation of a selective catalytic reduction (SCR) system on Steam Generators No. 4 for the reduction of emissions of nitrogen oxides (NO<sub>X</sub>). 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 applicant's mailing address is: Tampa Electric Company, P.O. Box 111, Tampa, Florida 33601-0111.

The SCR project is part of a larger program by TEC pursuant to a Consent Final Judgment (CFJ) with the Department and a Consent Decree (CD) with the Environmental Protection Agency to reduce emissions from its coal fired plants. There have been very substantial reductions of sulfur dioxide (SO<sub>2</sub>) to-date primarily due to the installation of a scrubber on Units 1 and 2. Other NO<sub>X</sub> control projects including installation of Low NO<sub>X</sub> burners and separate overfire air were previously approved.

Previous projects have already reduced  $NO_X$  emissions from Unit 4 from 0.40 pounds per million Btu of heat input (lb/mmBtu) in 1998 to 0.22 lb/mmBtu in 2004. This air construction permit will establish the SCR project as an applicable requirement for subsequent incorporation into the facility Title V Operation Permit. For reference, the permit will include a limit of 0.10 pounds of  $NO_X$  per million Btu of heat input (lb/mmBtu) from Unit 4.

The new  $NO_X$  emissions limit is much less than the other applicable limits of 0.44 lb/mmBtu and 0.60 lb/mmBtu for the same unit under the Federal Acid Rain Program and the applicable New Source Performance Standard. Further control of  $NO_X$  will reduce smog formation potential in the Tampa Bay area. SCR in combination with the existing scrubber on Unit 4 is also expected to reduce mercury emissions.

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 3804 Coconut Palm Drive Tampa, Florida 33619-8218 Telephone: 813/744-6100 Fax: 813/774-6084 Hillsborough County Environmental Protection Commission Air Management Division 1410 North 21 Street Tampa, Florida 33605 Telephone: 813/272-5530

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 <a href="mailto:Tom.Cascio@dep.state.fl.us">Tom.Cascio@dep.state.fl.us</a>, or call 850/921-9526 for additional information. Key documents may also be viewed at: <a href="https://www.dep.state.fl.us/Air/permitting/construction.htm">www.dep.state.fl.us/Air/permitting/construction.htm</a> in the power plant category.



Jeb Bush Governor

# Department of Environmental Protection

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

Colleen M. Castille Secretary

## DRAFT AIR CONSTRUCTION PERMIT NO. 0570039-020-AC

#### **PERMITTEE**

Tampa Electric Company (TEC)	File/Permit No.	0570039-020-AC
Big Bend Station	Facility ID:	0570039
Post Office Box 111	Project:	NO <sub>X</sub> Reduction (SCR)
Tampa, Florida 33601-0111		Steam Generator Unit 4
	SIC No.	4911
Authorized Representative:	Expires:	December 31, 2007
Karen Sheffield, General Manager	County	Hillsborough

#### PROJECT AND LOCATION

This is an Air Construction Permit for the installation of a selective catalytic reduction system for nitrogen oxides control on the coal-fired Steam Generator Unit No. 4 coal-fired boiler. The reductions are part of an emissions reduction program required by a Consent Final Judgment with the Department and a Consent Decree with the United States Environmental Protection Agency. The air construction permit will also establish these specific projects as applicable Title V Operation Permit conditions.

The Tampa Electric Company (TEC) Big Bend Station is located at Big Bend Road, North Ruskin, 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 SCR system 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

#### 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. There are ongoing nitrogen oxides (NO<sub>X</sub>) control projects pursuant to a Consent Final Judgment (CFJ) between TEC and the Department and a Consent Decree (CD) between TEC and the United States Environmental Protection Agency (EPA).

## **EMISSIONS UNITS**

This permit addresses the installation of an ammonia or urea injection system and catalyst at the following Unit:

Emission Unit No.	System	Emission Unit Description
004	Power Generation	486 MW Fossil Fuel Steam Generator

The proposed project is called selective catalytic reduction (SCR). Recent  $NO_X$  control projects on Unit 4 include: 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.

## REGULATORY CLASSIFICATION

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>X</sub>), carbon monoxide (CO), or volatile organic compounds (VOC), exceed 100 tons per year (TPY).

The addition of SCR to Unit No. 4 reduces actual and allowable  $NO_X$  emissions. It has been determined by the Department that the project is classified as a Pollution Control Project, as defined in 40 CFR 52.21(b)32, and meets the requirements of Rule 62-212.400(2)(a)2., F.A.C., and 40 CFR 52.21(b)(2)(iii)(h). Therefore, the project is not a modification under Department regulations.

# PERMIT SCHEDULE

- Month Day, 2005 Notice of Intent to Issue Permit published.
- March 18, 2005 Intent to Issue Permit distributed.
- February 15, 2005 Application deemed complete.
- February 15, 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.

- Application received on February 15, 2005.
- The Department's Technical Evaluation and Preliminary Determination, issued concurrently with this draft permit.
- 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.
- Title V Air Operation Permit Renewal No. 0570039-017-AV.
- Tampa Electric Submittals for PSC Docket 040750-EI.

## PROJECT DESCRIPTION

TEC will install a SCR system for NO<sub>X</sub> control on the facility's Unit No. 4 coal-fired boiler. This emissions unit is a Combustion Engineering dry bottom, tangentially fired fossil fuel steam generator, with a generator nameplate rating of 486 megawatts (MW). The basic boiler startup and shutdown procedures will not need to be altered with the addition of the SCR (i.e., the existing Unit No. 4 boiler ramp rate is adequate for the SCR catalyst). The project consists of:

- Installation of a "two plus one" SCR reactor downstream of the economizer and upstream of the preheater.
- Installation of an ammonia or urea storage, supply, and injection system the details of which are still under development.
- SCR tuning (i.e., adjustment of the ammonia or urea injection grid) during the initial commissioning of the system.
- Installation of a sulfur trioxide (SO<sub>3</sub>) control system such as alkali injection downstream of the Unit No. 4 preheater.
- Assessment of combined effects of SCR and previous NO<sub>X</sub> control projects upon fly ash marketability and development of treatment, reuse, or disposal options for the fly ash.

The project is much more involved than suggested by the brief description above. Following are additional details of the work likely to occur in association with the SCR installation:

- Demolition of existing flue gas ductwork as necessary to tie-in the SCR system
- Demolition of existing structural steel, modification and reinforcement of existing steel supports for a new duct from the existing steel
- Economizer bypass for gas temperature control
- Gas ductwork from economizer outlet to the SCR inlet (includes hoppers, mixers and turning vanes)
- SCR reactor (includes equipment for catalyst management) and catalyst
- Gas ductwork between the SCR & air heater
- Foundations for ductwork and structural steel
- Structural modifications for construction cranes
- Ammonia or Urea to ammonia conversion system
- Air heater modifications
- Electrical modifications
- Relocation of existing equipment and utilities
- Mobilization/demobilization
- Equipment rental
- Engineering construction management
- Asbestos removal
- Boiler and ESP reinforcement
- New Induced Draft ("ID") fans and motors
- ID fan foundations and electrical
- New and modified ductwork
- Auxiliary power and controls modifications

#### PROJECT SCHEDULE

Emissions Unit ID Number	Estimated start date	Estimated completion date
004	July 1, 2005	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 1410 North 21 Street Tampa, Florida 33605

Telephone: 813/272-5530; Fax: 813/272-5605

Department of Environmental Protection Southwest District Office, Air Resources Section 3804 Coconut Palm Drive Tampa, Florida 33619-1352

Telephone: 813/744-6100; Fax: 813/744-6084

- **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.** <u>Terminology.</u> 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. <u>Modifications</u>. 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.** <u>Permit Extension.</u> 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.10.1.** 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.11.** <u>Unconfined Particulate Emissions.</u> 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.12.** 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.13.** 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.14.** <u>Circumvention.</u> The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

# **CONTROL TECHNOLOGY**

**A.15.** The permittee shall install a selective catalytic reduction (SCR) system for nitrogen oxides ( $NO_X$ ) control on the facility's Unit No. 4 coal-fired boiler.

[Applicant Request and EPA Consent Decree (U.S. vs. TEC) dated February 29, 2000, amended October 4, 2000, and FDEP Consent Final Judgment (DEP vs. TEC) dated December 6, 1999.]

## EMISSION LIMITS AND STANDARDS

**A.16.** 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. 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.

[Applicant Request and EPA Consent Decree (U.S. vs. TEC) dated February 29, 2000, amended October 4, 2000, and FDEP Consent Final Judgment (DEP vs. TEC) dated December 6, 1999.]

{Permitting Note: Limits in condition are sufficient to also comply with requirements of: Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.44a(a); 40 CFR 60.4a(c); and PSD-FL-040]

**A.17.** Ammonia slip, measured at the stack downstream of all emissions control systems, shall not exceed 10 parts per million by volume (ppmv). Annual testing of ammonia slip shall be conducted, and corrective measures taken if measured values exceed 5 ppmv. [Applicant request; and Rule 62-4.070(3), F.A.C.]

## COMPLIANCE DETERMINATION

- **A.18.** Nitrogen oxides emissions shall be continuously monitored to confirm compliance, using the Unit's existing continuous emissions monitoring system (CEMS). Compliance is determined by calculating the arithmetic average of all hourly emission rates for NO<sub>X</sub> for the 30 successive boiler operating days, except for data obtained during startup, shutdown, malfunction. [Rule 62-204.800(7)(b)2., F.A.C.; 40 CFR 60.46a(g), 0570039-017-AV]
- **A.19.** Compliance with the ammonia (NH<sub>3</sub>) slip limit shall be determined using EPA conditional test method (CTM-027), or other methods approved by the Department. [Rule 62-4.070(3), F.A.C.]
- **A.20.** Compliance with the allowable emission limiting standards shall be determined by May 31, 2007 and annually thereafter as indicated in the facility's Title V Air Operations Permit, 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.]
- **A.21.** Compliance with the allowable emission limiting standards specified in this Air Construction Permit shall be determined using the appropriate specific conditions of the facility's existing Title V Air Operation Permit No. 0570039-017-AV. Compliance with the additional 30 day NO<sub>X</sub> limit of 0.10 lb/mmBtu shall be demonstrated using CEMS data beginning July 1, 2007 and every 30 calendar or operating days thereafter. [0570039-017-AV.]
- A.22. <u>Test Results</u>. 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.23. 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.]

## COMPLIANCE ASSURANCE

**A.24.** Compliance Assurance Monitoring (CAM). The permittee shall evaluate the applicability of CAM to Unit No. 4 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.]

#### APPENDIX GC – GENERAL CONDITIONS

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 and 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.

## 1.0 APPLICATION INFORMATION

1.1 Applicant Name and Address

Tampa Electric Company

P.O. Box 111

Tampa, Florida 33601-0111

Representative: Karen Sheffield, General Manager, Big Bend Station

1.2 Reviewing and Process Schedule

02-15-05:

Date of receipt of request at FDEP Bureau of Air Regulation

03-15-05:

Application deemed complete

03-30-05:

Issued intent

# 2.0 FACILITY INFORMATION

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

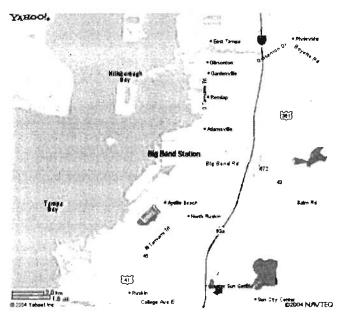




Figure 1. Ruskin, Apollo Beach, Big Bend

Figure 2. Big Bend Station

2.2 Standard Industrial Classification Code (SIC)

Major Group No.

49 Electric, Gas, and Sanitary Services

Group No.

491 Electric Services

Industry No.

4911 Electric Services

2.3 Existing Facility/Emission Unit Description

This facility is an electric utility.

This air construction permit will affect Steam Generators No. 4.

2.4 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<sub>X</sub>), particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), 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 provisions of the Clean Air Act.

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.

#### 3.0 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 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 Operation 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<sub>X</sub> Burners (LNBs) on Units 1, 2, and 3; installation of new coal nozzles suitable for low NO<sub>X</sub> 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.

## 4.0 ADDITIONAL NO<sub>x</sub> CONTROL REQUIREMENTS

Section V.E. of the CFJ requires that:

Tampa Electric Company shall add nitrogen oxide controls, repower or shut down Units 1 through 3 at Big Bend Station by May 2010 and at Unit 4 by May 2007. If SCRs or similar nitrogen oxide controls are installed, BACT for nitrogen oxide will be 0.10 lbs/mmBtu on Unit 4 and 0.15 lbs/mmBtu on Units 1, 2, and 3.

Section IV.B.33 of the CD requires that:

Tampa Electric shall advise EPA in writing, on or before May 1, 2005, whether Big Bend Unit 4 will be Shutdown, will be Re-Powered, or will continue to be fired by coal.

By letter dated August 19, 2004 Tampa Electric advised EPA that:

Based on the results of a recent comprehensive study performed on Big Bend Station, Big Bend Units 1, 2, 3 and 4 will continue to be fired on coal and as such will comply with the applicable provisions of the Consent Decree associated with this decision.

# Section IV.B.34.A of the CD requires that:

If Tampa Electric elects to continue firing Unit 4 with coal, on or before June 1, 2007, Tampa Electric shall install and commence operation of SCR, or other technology if approved in writing by EPA in advance, sufficient to limit the coal-fired Emission Rate of  $NO_X$  from Unit 4 to no more than 0.10 lb/mmBTU. Thereafter, Tampa Electric shall continue operation of SCR or other EPA approved control technology, and Tampa Electric shall continue to meet an Emission Rate for  $NO_X$  from Unit 4 no greater than 0.10 lb/mmBTU.

# 5.0 TAMPA ELECTRIC PROPOSAL TO COMPLY WITH CFJ AND CD

By letter dated July 15, 2004 Tampa Electric submitted a petition to the Florida Public Service Commission for approval of new environmental programs for cost recovery through the environmental Recovery Clause at Section 366.8255, Florida Statutes.

The petition summarizes the CFJ and CD and includes a study conducted by Tampa Electric and its consultant, Sargent Lundy. The study justifies the decision to continue operating Units 1 through 4 as coal-fired units and installing SCR to comply with the NO<sub>x</sub> requirements of the CFJ and CD.

The repowering options evaluated in the study included reboilering with subcritical pulverized coal ("PC") boilers, circulating fluidized bed ("CFB") boilers, conversion of the existing boilers to natural gas, combined cycle ("CC") gas turbine technology and IGCC similar to the Polk facility.

The greenfield options evaluated in the Study included all the foregoing repowering technologies with the exceptions that new PC boilers would be supercritical, and natural gas fired Rankin cycle units would not be evaluated due to lower cycle heat rates.

The cost to install SCR on the four existing coal-fired units was estimated to be \$305,450,000 whereas the cost of the least expensive CFB repowering option was estimated to be \$700,000,000 more. The cost to install SCR on Unit 4 was estimated to be \$65,350,000. The annual operating and maintenance costs were estimated to be \$12,750,000 of which \$2,500,000 corresponds to Unit 4.

By an order dated October 11, 2004 and consummated (made final) on November 4, 2004 the PSC granted Tampa Electric's petition.

## 6.0 SCR PROJECT ON UNIT 4

Much of the following description is from the application submitted to the Department on February 15, 2005. Some additional details are from the Tampa Electric website or their filings with the PSC:

Figure 3 is a diagram of the proposed SCR installation. This configuration is typically known as dusty or hot side SCR meaning it is placed before the electrostatic precipitator.

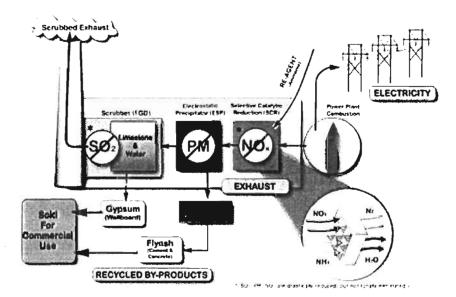


Figure 3. Diagram of SCR Installation and Existing Pollution Control Equipment Following are key points regarding the proposed project:

- The SCR system will be installed downstream of the economizer and upstream of the preheater.
- The SCR reactor will be designed as a "two plus one" catalyst configuration. It is planned that the third catalyst management layer, designed to maximize the residual catalyst life and lower operating costs, will be initially empty and will be charged as the initial two catalyst layers lose activation.
- The applicant has indicated that available options with respect to ammonia type and supply are currently being evaluated. The options include use of urea or use of ammonia delivered by pipeline via the existing ammonia grid that serves the fertilizer industry. The Department will be sent update reports as the study progresses.
- SCR tuning (i.e., adjustment of the ammonia injection grid) will be performed during the initial commissioning of the system.
- The Applicant will install a system (probably alkali injection) immediately downstream of the Unit No. 4 preheater to control the increase of sulfur trioxide (SO<sub>3</sub>) that the applicant expects will result from the use of a vanadium-containing catalyst in SCR systems.
- The Applicant has proposed that ammonia slip, measured at the stack downstream of all emissions control systems, be targeted at 5 parts per million by volume (ppmv).
   Annual testing of ammonia slip will be conducted and corrective measures taken if this target level is exceeded.
- The basic boiler startup and shutdown procedures will not need to be altered with the addition of the SCR (i.e., the existing Unit No. 4 boiler ramp rate is adequate for the SCR catalyst).

• The Applicant reviewed the impact that the operation of an SCR system would have on coal combustion by-products and found that the fly ash would have limited marketability due to increased carbon content. Therefore, a large portion of the fly ash could potentially need to be disposed of in a landfill. The Applicant researched this issue and found that other companies mitigate the SCR impact on fly ash by using carbon burnout technology to reduce the carbon content. The Applicant is currently evaluating the use of this technology, and has indicated that if it is found feasible at the facility, an air construction permit application will be submitted to the Department to implement the change.

More specific details of the capital cost components of the SCR system include:

- Demolition of existing flue gas ductwork as necessary to tie-in the SCR system
- Demolition of existing structural steel, modification and reinforcement of existing steel supports for a new duct from the existing steel
- Economizer bypass for gas temperature control
- Gas ductwork from economizer outlet to the SCR inlet (includes hoppers, mixers and turning vanes)
- SCR reactor (includes equipment for catalyst management)
- Gas ductwork between the SCR & air heater
- Foundations for ductwork and structural steel
- Structural modifications for construction cranes
- Catalyst
- Urea to ammonia conversion system
- Air heater modifications
- Electrical modifications
- Relocation of existing equipment and utilities
- Mobilization/demobilization
- Equipment rental
- Engineering construction management
- Asbestos removal
- Boiler reinforcement
- New Induced Draft ("ID") fans and motors
- ID fan foundations
- ID fan electrical
- New and modified ductwork
- ESP reinforcement
- Auxiliary power modifications
- Controls modifications

The Department notes that the scrubber should be able to remove SO<sub>3</sub> formed in the SCR system and ammonium sulfate/sulfite/bisulfite species to a high degree.

The Department notes that with respect to combustion by-products, the ash would most likely be affected by previous combustion modifications rather than by the SCR system. The SCR system could have some effect on the ash due to presence of ammonia, some of which could adhere to the fly ash.

## 7.0 PROJECT SCHEDULE

Emissions Unit ID Number	Estimated Start Date	Estimated Completion Date
004	July 1, 2005	June 1, 2007

## 8.0 PROJECT EMISSIONS & RULE APPLICABILITY

There will be a decrease in the allowable emissions of nitrogen oxides (NO x) as a result of implementing this project. Noted below are the existing limits and the proposed changes for the pollutant:

Pollutant	Existing limits	Proposed limit
Nitrogen Oxides (NO <sub>X</sub> )	0.60 pounds per mmBtu heat input (Title V Permit Specific Condition <b>B.9.</b> ), based on a 30-day rolling average.  0.44 pounds per mmBtu heat input (Acid Rain Part requirement).  Heat input to Unit No. 4 is limited to 4330 mmBtu/hour.	0.10 pounds per mmBtu heat input, based on a 30- day rolling average.  Emissions will be continuously monitored to confirm compliance, using the Unit's existing continuous emissions monitoring system (CEMS).

Unit 4 was originally designed for relatively low  $NO_X$  operation. The system was upgraded by inclusion of new Low  $NO_X$  designed coal and air nozzles together with modifications to the existing close coupled overfire air (CCOFA) system. In late 2003 TEC installed a separate overfire air (SOFA) system that provides for deeper staging of the combustion process and further reductions of  $NO_X$ .

According to the EPA Clean Air Markets Website, Unit 4 emitted 0.40 lb/mmBtu in 1998. In 2003, Units 4 emitted 0.35 lb/mmBtu. Emissions through the third quarter of 2004 indicate emissions of 0.22 lb/mmBtu. This is already a substantial reduction todate.

Further reduction to 0.10 lb/mmBtu can be accomplished without aggressive ammonia or urea injection. This supports the idea that SCR will not necessarily have as much effect on ash properties compared with similar projects at other plants. It is possible that Tampa Electric can back off somewhat in the combustion techniques used to reduce NO<sub>X</sub> when SCR becomes available and then optimize the control stratagem to reduce impacts on ash.

Using the appropriate maximum heat input value for Unit No. 4 (i.e., 4,330 mmBtu/hour), and the existing and proposed emissions limits for NO<sub>X</sub> noted above, results in a calculation of the expected reduction of potential NO<sub>X</sub> emissions of about 6,448 tons per year. This is equivalent to a 77% reduction from current allowable limits under the Acid Rain Part of the facility's Title V Permit Renewal. Computations follow below:

(0.44 - 0.10) lbs/mmBtu = 0.34 lbs/mmBtu heat input reduction

 $0.34 \text{ lbs/mmBtu} \times 4330 \text{ mmBtu/hour} \times 8760 \text{ hours per year} / 2000 \text{ lbs/ton} = 6,448 \text{ tons per year}$ 

Based on a more realistic estimate of an 80 percent capacity factor and the most recent emission rate of 0.22 lb/mmBtu, the calculations would be as follows:

(0.22 - 0.10) lbs/mmBtu = 0.12 lbs/mmBtu heat input reduction

 $0.12 \text{ lbs/mmBtu} \times 4330 \text{ mmBtu/hour} \times (0.80) 8760 \text{ hours per year} / 2000 \text{ lbs/ton} = 1,820 \text{ tons per year}$ 

In summary, the addition of SCR to Unit No. 4 reduces actual as well as allowable NO<sub>X</sub> emissions, and does not involve any other significant changes related to emissions of other pollutants or operational parameters (e.g., mass flow to the stack, other than the addition of dilution air for ammonia injection, or stack temperature). The SCR system in combination with the existing scrubbers should help reduce mercury emissions as well.

It has been determined by the Department that the project is a Pollution Control Project, as defined in 40 CFR 52.21(b)(32), and meets the requirements of Rule 62-212.400(2)(a)2., F.A.C., and 40 CFR 52.21(b)(2)(iii)(h). Therefore, the project is not defined as a modification under Department regulations.

Furthermore the additional projects related to the SCR installation and enumerated above are projects in support of a pollution control project. They are treated as pollution control projects and do not constitute modifications under Department regulations.

The emission unit 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. 0590039-017-AV.

#### 9.0 CONCLUSION

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.

### **MEMORANDUM**

To:

Trina Vielhauer

Through:

Al Linero

From:

Tom Cascio

Date:

February 25, 2005

Subject:

Draft Air Construction Permit No. 0570039-020-AV

**Big Bend Station** 

This is an Air Construction Permit for the installation of a selective catalytic reduction (SCR) system for nitrogen oxides (NO<sub>x</sub>) control on the facility's Unit No. 4 coal-fired boiler. The bases for this permit are agreements entered into by Tampa Electric Company with the Environmental Protection Agency, and the Department, concerning the installation of additional pollution control systems at the facility. Implementing this project will result in a significant decrease in nitrogen oxides potential emissions from the boiler.

I recommend your signature and forwarding to Barbara for clerking.

Trina: I relied heavily on TECO filings with PSC a fter they basically told us they had no information besides what was in the application.

This is a good project that will have beneficial ds on mercure effects on mercury. I do not agree with their claims that SCR will cause increase in combustion by-products in fly ash. I believe this was already caused by other low-Nox strategies. They need to track Sate of mercury in future ash beneficiation for which they will request a permit.

They already had two spen-house sessions to

acquaint residents with their plans.
We should get application(s) later this year for Unit 1-3 sor systems since they already presented plans to PSC.

(Note: Cost is ~ \$75,000,000

per unit for your future reference)

<ul> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> </ul>	A. Signature
Attach this card to the back of the mailpiece, or on the front if space permits.	B. Received by (Printed Name) C. Date of
Ms. Karen Sheffield, General Manager Big Bend Station Tampa Electric Company Post Office Box 111 Tampa, Florida 33601-0111	D. Is delivery address different from term 1?
	☐ Insured Mail ☐ C.O.D.  4. Restricted Delivery? (Extra Fee) ☐ Ye.

	U.S. Postal CERTIFIED	Service  D MAIL RECEI Only, No Insurance Cov	PT erage Provided)
9359	A Company of the Comp	Street Garage	And Land Head
6	Postage	\$	
3109	Certified Fee		Postmark
щ	Return Receipt Fee (Endorsement Required)		Here
0013	Restricted Delivery Fee (Endorsement Required)		•
1670	Ma Varain Chaffi	ald General Manager	
].h	Ms. Karen Sheffi Big Bend Station	eld, General Manager	
	Tampa Electric C		
7000	Post Office Box		
7	Tampa, Florida	33601-0111	
			See Beverse for Instructions



TAMPA ELECTRIC

February 8, 2005

Ms. Teresa Heron,
Florida Department of
Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, FL 32301

RECEIVED

FEB 09 2005

BUREAU OF AIR REGULATION

**Via FedEx Airbill No. 7922 0108 1668** 

Re: Tampa Electric Company

Big Bend Station Consent Decree Civil Action No. 99-2524 CIV-T-23F

Air Construction Permit Application for Unit 4 Selective Catalytic Reduction (SCR) Project

Dear Ms. Heron.

Tampa Electric Company (TEC) requests an air construction permit to install a selective catalytic reduction (SCR) system for nitrogen oxides ( $NO_x$ ) control on its Big Bend Station Unit 4 coal-fired boiler. TEC entered into the agreements with the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) concerning the installation of additional air pollution control systems at Big Bend Station. These agreements (EPA Consent Decree and FDEP Consent Final Judgment) included requirements to install additional air pollution control systems for  $NO_x$  control on Unit 4. In response to these requirements, TEC determined that the installation of low  $NO_x$  burners (LNB), separated overfire air (SOFA), and an SCR system are the technologies to be utilized to reduce the  $NO_x$  emissions on Big Bend Unit 4 to satisfy the requirements of the agreements.

Additionally, TEC reviewed the impacts that operation of an SCR would have on the coal combustion byproducts and found that the fly ash would have limited marketability due to increased carbon content. Therefore, a large portion of the fly ash could potentially need to be disposed of in a landfill. TEC researched this issue and found that several other companies mitigate the SCR impacts on fly ash by using carbon burnout (CBO) technology to reduce the carbon content. TEC is currently evaluating use of this technology and if it is determined to be feasible at Big Bend Station a separate air construction permit will be submitted.

Ms. Teresa Heron February 8, 2005 Page 2 of 2

Please find the enclosed air construction permit application for Big Bend Station's Unit 4 SCR.

TEC appreciates the cooperation of the Department in this matter. If you have any questions or comments, please contact Shelly Castro or me at (813) 228-4408.

Sincerely,

Shelly Castro

Engineer - Air Programs

Environmental, Health & Safety

EHS/bmr/SSC215

### Enclosure

c/enc: Ms. Alice Harman, EPCHC

Mr. Jerry Kissel, FDEP SW

Mr. David Lloyd, EPA

Mr. Scott Sheplak, FDEP

Ms. Trina Vielhauer, FDEP

Mr. Sterlin Woodard, EPCHC

### INTRODUCTION

Tampa Electric Company (TEC) requests an air construction permit to add a selective catalytic reduction (SCR) system for nitrogen oxides (NO<sub>x</sub>) control to its Big Bend Station Unit 4 coal-fired boiler. TEC entered into agreements with the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (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<sub>x</sub> control on Unit 4. In response to these requirements, TEC determined that the installation of low-NO<sub>x</sub> burners, separated overfire air (SOFA), and a SCR system are the technologies to be utilized to reduce Big Bend Station Unit 4 NO<sub>x</sub> emissions.

Figure 1 shows the location of the SCR, which will be installed downstream of the economizer and upstream of the air preheater. The SCR reactor is designed as a two plus one catalyst configuration. The third catalyst management layer, designed to maximize the residual catalyst life and lower operating costs, will be initially empty and will be charged as the initial two catalyst layers lose activation.

TEC is currently evaluating available options with respect to ammonia type and supply, and will notify FDEP when TEC's plans are finalized. SCR tuning (i.e., adjustment of the ammonia injection grid) will be performed during the initial commissioning of the system.

TEC proposes to install a system immediately downstream of the Unit 4 preheater to control the inherent increases of sulfur trioxide (SO<sub>3</sub>) that result from the use of vanadium-containing catalyst in SCR control systems.

TEC is proposing that ammonia slip, measured at the stack downstream of all emission control systems, be targeted at 5 parts per million by volume (ppmv). TEC is also proposing to conduct annual testing of ammonia slip and perform corrective measures if the target level is being exceeded.

SIMPLIFIED FLOW DIAGRAM OF BIG BEND UNIT 4 CONTROL SYSTEMS

Source: ECT, 2004.

=:



The addition of the SCR system will allow Unit 4 to meet the  $NO_x$  emission limit, specified in the Consent Decree, of 0.10 pound per million British thermal unit (lb/MMBtu) based on a 30-day rolling average.  $NO_x$  will be continuously monitored, using the existing Unit 4  $NO_x$  continuous emissions monitoring system, to confirm compliance. The SCR system does not add significant mass flow to the stack other than the addition of dilution air for ammonia injection. The stack temperature will be unaffected.

The basic boiler startup and shutdown procedures will not need to be altered with the addition of the SCR (i.e., the existing Unit 4 boiler ramp rate is adequate for the SCR catalyst).

Major construction activities for the Big Bend Station Unit 4 SCR control system are scheduled to begin July 1, 2005, and be completed by June 1, 2007.

FDEP's Application for Air Permit, Long Form, follows this introduction. Attachment A provides a process flow diagram of Unit 4 SCR.

### I. APPLICATION INFORMATION

Air Construction Permit-Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

	To ensure accuracy, please	see form mstruct	10115.				
Id	dentification of Facility						
1.	. Facility Owner/Company Name: Tampa Elect	ric Company	- <del>-</del>				
2.	2. Site Name: Big Bend Station		<u> </u>				
3.	3. Facility Identification Number: 0570039						
4.	Facility Location: Street Address or Other Locator: 13031 Wyan	dotte Road	•				
	City: Apollo Beach County: Hills	sborough	Zip Code: 33572				
5.	6. Relocatable Facility? 6. Yes No	Existing Title  Yes	V Permitted Facility?  No				
A	Application Contact	•.					
1.	. Application Contact Name: Shelly Castro, En	gineer – Air Pı	ograms				
2.	<ul><li>Application Contact Mailing Address</li><li>Organization/Firm: Tampa Electric Company</li></ul>	7					
	Street Address: P. O. Box 111						
	City: <b>Tampa</b> State:	FL	Zip Code: <b>33601</b>				
3.	Application Contact Telephone Numbers						
	Telephone: (813) 228-4408 ext.	Fax: (813) 228	8-1308				
4.	. Application Contact Email Address: sscastro	@tecoenergy.c	om				
A	Application Processing Information (DEP Use)						
1.	. Date of Receipt of Application:	2-15-04					
2.	2. Project Number(s):	2-15-05	020-AC				
3.	3. PSD Number (if applicable):						
4.	. Siting Number (if applicable):	•					

### **Purpose of Application**

DEP Form No. 62-210.900(1) – Form

### Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
004	Unit No. 4 Steam Generator	N/A	N/A
·			
		:	N.
	·		
	, .		
	,		

Check one: Attached - Amount: \$	Not Applicable
----------------------------------	----------------

DEP Form No. 62-210.900(1) – Form

Effective: 06/16/03

### Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name:

Karen Sheffield, General Manager, Big Bend Station

2. Owner/Authorized Representative Mailing Address...

Organization/Firm: Tampa Electric Company

Street Address: P.O. Box 111

City: Tampa

State: Florida

Zip Code: 33601-0111

3. Owner/Authorized Representative Telephone Numbers...

Telephone: 813-228-4111

ext.

Fax: 813-228-1308

- 4. Owner/Authorized Representative Email Address: kasheffield@tecoenergy.com
- 5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Karen Sheffield
Signature

2/8/05

Date

### Application Responsible Official Certification N/A

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1.	Application Responsible Official Name:
2.	Application Responsible Official Qualification (Check one or more of the following options, as applicable):
	For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
	<ul> <li>For a partnership or sole proprietorship, a general partner or the proprietor, respectively.</li> <li>For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.</li> </ul>
3.	The designated representative at an Acid Rain source.
٥.	Application Responsible Official Mailing Address  Organization/Firm:
	Street Address:
	City: State: Zip Code:
4.	Application Responsible Official Telephone Numbers Telephone: ext. Fax:
5.	Application Responsible Official Email Address:
6.	Application Responsible Official Certification:
ap sta kn ted eq an red pe an en	the undersigned, am a responsible official of the Title V source addressed in this air permit plication. I hereby certify, based on information and belief formed after reasonable inquiry, that the atements made in this application are true, accurate and complete and that, to the best of my owledge, any estimates of emissions reported in this application are based upon reasonable chniques for calculating emissions. The air pollutant emissions units and air pollution control uipment described in this application will be operated and maintained so as to comply with all plicable standards for control of air pollutant emissions found in the statutes of the State of Florida d rules of the Department of Environmental Protection and revisions thereof and all other applicable quirements identified in this application to which the Title V source is subject. I understand that a rmit, if granted by the department, cannot be transferred without authorization from the department, all will promptly notify the department upon sale or legal transfer of the facility or any permitted missions unit. Finally, I certify that the facility and each emissions unit are in compliance with all eplicable requirements to which they are subject, except as identified in compliance plan(s) submitted th this application.
	Signature

DEP Form No. 62-210.900(1) – Form

### Professional Engineer Certification

Г <u>.</u>	D. C I.E W. D
1.	Professional Engineer Name: Thomas W. Davis
	Registration Number: 36777
2.	Professional Engineer Mailing Address Organization/Firm: Environmental Consulting & Technology, Inc.
	5 5,7
	Street Address: 3701 Northwest 98 <sup>th</sup> Street
_	City: Gainesville State: FL Zip Code: 32606-5004
3.	
_	Telephone: (352) 332-0444 ext. Fax: (352) 332-6722
	Professional Engineer Email Address: tdavis@ectinc.com
٥.	Professional Engineer Statement:
	I, the undersigned, hereby certify, except as particularly noted herein*, that:
	(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
	(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.
	(3) If the purpose of this application is to obtain a Title $V$ air operation permit (check here $\square$ , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.
	(4) If the purpose of this application is to obtain an air construction permit (check here $\square$ , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here $\square$ , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.
200	so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.  (5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here fits), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions poutained in such permit.
五	1/27/05
7	PSignature Date
(E)	(seal) Av. college
* /	Attach any exception to certification statement.
DE	EP Form No. 62-210.900(1) – Form

### II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

### Facility Location and Type

1.	1. Facility UTM Coordinates  Zone 17 East (km) 361.9  North (km) 3,075.0			2. Facility Latitude/Longitude Latitude (DD/MM/SS) Longitude (DD/MM/SS)					
3.	Governmental	4. Facility Status	5.	<b>J</b> J	6.	Facility SIC(s):			
	Facility Code:	Code:		Group SIC Code:		4911			
	0	A		49					
7.	Facility Comment:								

### **Facility Contact**

1.	Facility Contact Name:	•					
	Karen Zwolak, Senior Environ	mental C	onsultant				
2.	Facility Contact Mailing Addres	S		·.			
	Organization/Firm: Tampa Elec	tric Com	pany				
	Street Address: P. O. Box 111						
	City: Tampa	S	tate: FL	Zip Code: 33601			
3.	Facility Contact Telephone Num	bers:					
	Telephone: (813) 228-4111	ext.	Fax:	(813) 228-1308			
4.	Facility Contact Email Address:	kozwola	k@tecoene	rgy.com			

### Facility Primary Responsible Official N/A

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1.	Facility Primary l	Responsi	ble Offici	al Name:						
2.	. Facility Primary Responsible Official Mailing Address Organization/Firm:									
	Street Address	s:								
	Ci	ty:		State:			Zip Co	de:		
3.	Facility Primary 1	Responsi	ble Offici	al Telephor	e Number	s				
	Telephone: (	)	-	ext.	Fax:	(	)	-		
4.	Facility Primary l	Responsi	ble Offici	al Email Ac	ldress:					

DEP Form No. 62-210.900(1) – Form

### **Facility Regulatory Classifications**

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1.	
_ · · _	Small Business Stationary Source Unknown
2.	Synthetic Non-Title V Source
3.	Title V Source
4.	Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)
5.	Synthetic Minor Source of Air Pollutants, Other than HAPs
6.	Major Source of Hazardous Air Pollutants (HAPs)
7.	Synthetic Minor Source of HAPs
8.	One or More Emissions Units Subject to NSPS (40 CFR Part 60)
9.	One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)
10.	One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)
11.	Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))
12. Fa	cility Regulatory Classifications Comment:
1	

### **List of Pollutants Emitted by Facility**

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NOX	A	N
SO2	A	. <b>Y</b>
СО	A	N
PM10	A	<b>Y</b>
PM	· <b>A</b>	Y
VOC	A	N
H106 (Hydrogen Chloride)	A	N
H107 (Hydrogen Fluoride)	A	N
H133 (Nickel Compounds)	A	N
HAPS (Total)	<b>A</b>	N
·		
		·
	·	

### **B. EMISSIONS CAPS**

### Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
SO2	N	001 – 004		71,810	ESCPSD
PM/PM10	N	001 - 004		2,767	ESCPSD
				_	
				_	

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

Additional  $SO_2$  caps for Units 001-003 are 31.5 ton/hr (3-hour average) and 25 ton/hr (24-hour block average). In addition, Units 001 and 002 are limited to 16.5 ton/hr  $SO_2$  (24-hour block average).

Effective: 06/16/03

# C. FACILITY ADDITIONAL INFORMATION Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID: Previously Submitted, Date: Oct. 2004
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID: Att. A Previously Submitted, Date:
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID: Previously Submitted, Date: Oct. 2004
<u>A</u> (	Iditional Requirements for Air Construction Permit Applications
1.	Area Map Showing Facility Location:  Attached, Document ID: Previously Submitted, Date: June 30, 2004
2.	Description of Proposed Construction or Modification:  Attached, Document ID: See comment below  Not Applicable
3.	Rule Applicability Analysis:  Attached, Document ID: Previously Submitted, Date: June 30, 2004
4.	List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):  Attached, Document ID: Not Applicable
5.	Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):  Attached, Document ID: Previously Submitted, Date: June 30, 2004
6.	Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):  Attached, Document ID: Not Applicable
7.	Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):  Attached, Document ID:  Not Applicable
8.	Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):  Attached, Document ID: Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):  Attached, Document ID: Not Applicable
10	. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):

DEP Form No. 62-210.900(1) - Form

### Additional Requirements for FESOP Applications N/A 1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): Attached, Document ID: Not Applicable Additional Requirements for Title V Air Operation Permit Applications N/A See comment below 1. List of Insignificant Activities (Required for initial/renewal applications only): Attached, Document ID: Not Applicable 2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought): Attached, Document ID: Not Applicable 3. Compliance Report and Plan (Required for all initial/revision/renewal applications): Attached, Document ID: Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing. 4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only): Attached, Document ID: Equipment/Activities On site but Not Required to be Individually Listed Not Applicable 5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only): Attached, Document ID:\_\_\_\_\_ Not Applicable 6. Requested Changes to Current Title V Air Operation Permit: Attached, Document ID: Not Applicable Additional Requirements Comment A description of the proposed addition of a selective catalytic NO<sub>x</sub> control system to Unit 4 is provided in the Introduction and also in the Application Comment section on Page 2 of this application.

### **EMISSIONS UNIT INFORMATION**

DEP Form No. 62-210.900(1) – Form

Effective: 06/16/03

### A. GENERAL EMISSIONS UNIT INFORMATION

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or

### **Title V Air Operation Permit Emissions Unit Classification**

em	permit or FE  The emis issions unit.	SOP only.) sions unit addressed	in this Emission	tem if applying for an one Unit Information Sons Unit Information	Section is a regulated
unr	egulated emis		in tino Emilion	ons ome miormation c	
Em	nissions Unit	Description and Sta	itus		
1.	Type of Emis	ssions Unit Addresse	d in this Section	on: (Check one)	
	process o		activity, which	dresses, as a single em h produces one or mor pint (stack or vent).	, ,
1	process o		nd activities wh	nich has at least one de	nissions unit, a group of efinable emission point
				dresses, as a single en ies which produce fug	·
		on of Emissions Uni Engineering dry bo		this Section: tially fired fossil fuel	steam boiler
3.	Emissions U	nit Identification Nur	nber: <b>004</b>		
	Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit?  Yes  No
9.	Package Unit				
10		r: Combustion Engi lameplate Rating: 48		Model Number:	
		nit Comment:		· <u>-</u>	
11.	Emissions Of	·	·		

DEP Form No. 62-210.900(1) – Form Effective: 06/16/03

# EMISSIONS UNIT INFORMATION Section [1] of [1]

### **Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

Low-NO<sub>x</sub> Burners (LNB) - NO<sub>x</sub> [Control Device Code 205]

Separated Overfire Air (SOFA) - NO<sub>x</sub> [Control Device Code 024]

Selective Catalytic Reduction (SCR) - NO<sub>x</sub> [Control Device Code 139]

Miscellaneous Control Devices - SO<sub>3</sub> [Control Device Code 099]

Electrostatic Precipitator (ESP) - PM/PM<sub>10</sub> [Control Device Code 010]

Wet Limestone Injection Flue Gas Desulfurization (FGD) -  $SO_2$  & PM/PM<sub>10</sub> [Control Device Code 042]

14

2. Control Device or Method Code(s): 205, 024, 139, 099, 010, 042

### **B. EMISSIONS UNIT CAPACITY INFORMATION**

(Optional for unregulated emissions units.)

### **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Process or Through	put Rate:		
2.	Maximum Production Rate: 48	86 MW	٠.	
3.	Maximum Heat Input Rate: 4,3	330 million Btu/hr		
4.	Maximum Incineration Rate:	pounds/hr		
		tons/day	· .	
5.	Requested Maximum Operatin	-		
		24 hours/day		7 days/week
		52 weeks/year		8,760 hours/year
6.	Operating Capacity/Schedule (	Comment:		
			•	
	•			
,				•
			•	
				•

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# EMISSIONS UNIT INFORMATION Section [1] of [1]

# C. EMISSION POINT (STACK/VENT) INFORMATION (Optional for unregulated emissions units.)

### **Emission Point Description and Type**

1.	Identification of Point on Flow Diagram: Unit 4 Ex		2. Emission Point 7	ype Code:
3.	Descriptions of Emission	Points Comprising	this Emissions Unit	for VE Tracking:
	N/A			
			·	
				•
4.	ID Numbers or Description	ns of Emission Ur	nits with this Emission	Point in Common:
	003 and 004 (when opera	ating in FGD inte	grated mode)	
5.	Discharge Type Code:	6. Stack Height		7. Exit Diameter:
	V	490 feet		24 feet
8.	Exit Temperature: 127 °F		netric Flow Rate:  250 acfm	10. Water Vapor: %
	127 1	1,014,	230 acini	70
11.	Maximum Dry Standard F dscfm	low Rate:	12. Nonstack Emission Point Height: feet	
13.	Emission Point UTM Coo	rdinates		Latitude/Longitude
٠	Zone: East (km):		Latitude (DD/M)	, , , , , , , , , , , , , , , , , , ,
15	North (km) Emission Point Comment:		Longitude (DD/I	<u></u>
19.	Limssion i oint Comment.		٠.	
Sta	ick data is for Unit 4, scru	bbed.		

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### D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment	<b>Description</b>	and Rate:	Segment 1	of 5

1. S	egment Description (Proc	cess/Fuel Type):		
Coal	burned in Unit No. 4.			
ı	ource Classification Code -01-002-01	e (SCC):	3. SCC Units: Tons Burn	
1	faximum Hourly Rate: <b>96.8</b>	5. Maximum 1,724,127	Annual Rate:	6. Estimated Annual Activity Factor:
7. M	Iaximum % Sulfur: .4	8. Maximum 13.3	% Ash:	9. Million Btu per SCC Unit: 22
10. S	egment Comment:			
Btu p	oer SCC unit value (Fiel	ld 9) based on a	nominal coal h	eat content of 11,000 Btu/lb.
Segm	nent Description and Ra	ite: Segment 2	of <u>5</u>	
1. S	egment Description (Prod	cess/Fuel Type):		`
No. 2	fuel oil burned in Unit	No. 4.		
1	ource Classification Code -01-005-01	e (SCC):	3. SCC Units: 1,000 Galle	ons Burned
	faximum Hourly Rate:	5. Maximum N/A	Annual Rate:	6. Estimated Annual Activity Factor:
	faximum % Sulfur: .5	8. Maximum <b>0.1</b>	% Ash:	9. Million Btu per SCC Unit: 139
10. S	egment Comment:	•		
	tuel oil burned only du of a mill.	ıring startup, sl	nutdown, flame	stabilization, and during the
		-		

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### **EMISSIONS UNIT INFORMATION**

Section [1]

of [1]

### D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

### Segment Description and Rate: Segment 3 of 5

			_			
1.	Segment Description (Proc	cess/	Fuel Type):			
Pe	troleum coke burned in U	nit N	No. 4.			
2.	Source Classification Code	e (SC	CC):	3. SCC Units:		
	1-01-008-01			Tons Burn	ed	
4.	Maximum Hourly Rate: 39.4	5.	Maximum 2 344,825	Annual Rate:	6.	Estimated Annual Activity Factor:
7.	Maximum % Sulfur: 7.0	8.	Maximum (	% Ash:	9.	Million Btu per SCC Unit: 28
10.	Segment Comment:				•	<del>-</del>
Ma	aximum petcoke rates (Fie	elds 4	4 and 5) bas	sed on 20% of co	oal 1	rates.

### Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type):

Raw coal residual burned in Unit No. 4.

2.	Source Classification Code 1-01-002-01	e (SCC):	3. SCC Units: Tons Burn		
4.	Maximum Hourly Rate:	5. Maximum 73,000	Annual Rate:	6.	Estimated Annual Activity Factor:
7.	Maximum % Sulfur: 1.43	8. Maximum <sup>6</sup> 57.7	% Ash:	9.	Million Btu per SCC Unit: 6.1

<sup>10.</sup> Segment Comment:

<sup>\*</sup>Firing of raw coal residual is limited to 200 tons per day total for Units 1 through 4. Maximum annual coal residual rate (Field 5) is the total for Units 1 through 4.

### D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 5 of 5

Sulfur, ash, and heat contents are on a dry basis.

2. Source Classification Cod 1-01-002-01	le (SCC):	3. SCC Units Tons Burn	
4. Maximum Hourly Rate: *	5. Maximum 182,500	Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 1.5	8. Maximum 35.4	% Ash:	9. Million Btu per SCC Unit: 17.95
10. Segment Comment:	-		

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### E. EMISSIONS UNIT POLLUTANTS

### List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control	3. Secondary	4. Pollutant
	Device Code	Control Device	Regulatory Code
		Code	
1 - NOX	205 (Low NO <sub>x</sub>	024 (Modified	EL
	Burners)	Furnace or Burner	
		Design [SOFA])	
		and 139 [SCR])	
2 - CO			EL
3 - PM	010 (ESP)	042 (FGD)	EL
4 - PM10	010 (ESP)	042 (FGD)	NS
5 - SO2	042 (FGD)		EL
6 - VOC	·	·	NS
7 - H106 (HCl)		·	NS
8 - H107 (HF)			NS
9- HAPS			NS

# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO <sub>x</sub>		ent Efficier  0 percent	ncy of Control:
3. Potential Emissions:		4. Synthe	etically Limited?
433 lb/hour 1,897	tons/year	☐ Ye	s 🛛 No
5. Range of Estimated Fugitive Emissions	(as applicable): N	/ <b>A</b>	_
to tons/year			·
6. Emission Factor: N/A			7. Emissions
			Method Code:
Reference:			0
8. Calculation of Emissions:			
$\frac{0.10 \text{ lb NO}_x}{MMBtu} \times \frac{4,330 \text{ MMBtu}}{hr} = 433 \text{ lb } \frac{NO_x}{hr}$ $433 \text{ lb } \frac{NO_x}{hr} \times 8,760 \frac{hr}{yr} \times \frac{ton}{2,000} = 1,897 \frac{ton}{yr}$			
9. Pollutant Potential/Estimated Fugitive E	missions Commen	t:	
			<u> </u>

# POLLUTANT DETAIL INFORMATION Page [2] of [4]

# F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions 1	_ of <u>_1</u>
Basis for Allowable Emissions Code:     Other	2. Future Effective Date of Allowable Emissions: June 1, 2007
3. Allowable Emissions and Units: 0.10 lb/MBtu,	4. Equivalent Allowable Emissions: 433 lb/hour 1,897 tons/year
30-day rolling average	
5. Method of Compliance: NO <sub>x</sub> CEMS	
6. Allowable Emissions Comment (Description	n of Operating Method):
	Consent Decree and the FDEP Consent Final
Judgment	
Allowable Emissions Allowable Emissions	_ of
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
C All 11 Faire C (D)	
6. Allowable Emissions Comment (Description	n of Operating Method):
Allowable Emissions	of
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions:  lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description	n of Operating Method):
	,

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# EMISSIONS UNIT INFORMATION Section [1] of [1]

# POLLUTANT DETAIL INFORMATION Page [3] of [4]

# F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

### **Potential/Estimated Fugitive Emissions**

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit

applying for an air operation permit.			
1. Pollutant Emitted:	2. Total Pero	cent Efficiency of Control:	
		· · · · · · · · · · · · · · · · · · ·	
3. Po	tential	4. Synthetically Limited?	
Emissions:		Yes No	
lb/hour_	tons/year		
5. Range of Estimated Fugitive Emissions (as	applicable):		
to tons/year			
6. Emission Factor:		7. Emissions Method Code:	
Reference:		0	
8. Calculation of Emissions:			
		•	
·			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			
Other than NO <sub>x</sub> , TEC is not requesting any revisions to currently authorized emission standards			
as specified in FINAL Title V Permit No. 0570039-017-AV. The information requested by Section			
F1 regarding Unit 4 allowable emissions for pollutants other than NO <sub>x</sub> can be found in FINAL			
Title V Permit No. 0570039-017-AV.			

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### **EMISSIONS UNIT INFORMATION** Section [1] of [1]

### POLLUTANT DETAIL INFORMATION Page [4] of [4]

### F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -**ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions	of
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description	· · · · · · · · · · · · · · · · · · ·
Other than NO <sub>x</sub> , TEC is not requesting any revision	
as specified in FINAL Title V Permit No. 0570039 F2 regarding allowable emissions for pollutants of	
FINAL Title V Permit No. 0570039-017-AV.	ther than NO <sub>x</sub> for Omit No. 4 can be found in
	÷ -
Allowable Emissions Allowable Emissions	of
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
<ol> <li>Basis for Allowable Emissions Code:</li> <li>Allowable Emissions and Units:</li> </ol>	
	Emissions:
	Emissions: 4. Equivalent Allowable Emissions:
3. Allowable Emissions and Units:	Emissions: 4. Equivalent Allowable Emissions:
3. Allowable Emissions and Units:	Emissions: 4. Equivalent Allowable Emissions:
3. Allowable Emissions and Units:	Emissions:  4. Equivalent Allowable Emissions: lb/hour tons/year
Allowable Emissions and Units:     Method of Compliance:	Emissions:  4. Equivalent Allowable Emissions: lb/hour tons/year
Allowable Emissions and Units:     Method of Compliance:	Emissions:  4. Equivalent Allowable Emissions: lb/hour tons/year

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# EMISSIONS UNIT INFORMATION Section [1] of [1]

### G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation \_\_\_ of 1. Visible Emissions Subtype: 2. Basis for Allowable Opacity: Rule Other 3. Allowable Opacity: **Normal Conditions:** % **Exceptional Conditions:** % Maximum Period of Excess Opacity Allowed: min/hour 4. Method of Compliance: 5. Visible Emissions Comment: TEC is not requesting any revisions to currently authorized visible emission standards as specified in FINAL Title V Permit No. 0570039-017-AV. The information requested by Section G regarding visible emissions for Unit No. 4 can be found in FINAL Title V Permit No. 0570039-017-AV. Visible Emissions Limitation: Visible Emissions Limitation of 1. Visible Emissions Subtype: 2. Basis for Allowable Opacity: Rule Other 3. Allowable Opacity: **Normal Conditions:** % **Exceptional Conditions:** % Maximum Period of Excess Opacity Allowed: min/hour 4. Method of Compliance: 5. **Visible Emissions Comment:** 

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# EMISSIONS UNIT INFORMATION Section [1] of [1]

### H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor of 1. Parameter Code: 2. Pollutant(s): Other 3. CMS Requirement: Rule 4. Monitor Information: Manufacturer: Model Number: Serial Number: 5. Installation Date: 6. Performance Specification Test Date: 7. Continuous Monitor Comment: Information regarding Unit No. 4 CEMS remains unchanged from the data previously provided to the Department. Continuous Monitoring System: Continuous Monitor \_\_\_ of 1. Parameter Code: 2. Pollutant(s): 3. CMS Requirement: Rule Other 4. Monitor Information: Manufacturer: Model Number: Serial Number: 5. Installation Date: 6. Performance Specification Test Date: 7. Continuous Monitor Comment:

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### EMISSIONS UNIT INFORMATION

Section [1]

of [1]

### I. EMISSIONS UNIT ADDITIONAL INFORMATION

### Additional Requirements for All Applications, Except as Otherwise Stated

1.	Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID: A Previously Submitted, Date
2.	Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID:
3.	Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID: Intro. Previously Submitted, Date
4.	Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
	Attached, Document ID: Previously Submitted, Date June 2004  Not Applicable (construction application)
5.	Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)  Attached, Document ID:
6.	Compliance Demonstration Reports/Records  Attached, Document ID:
	Test Date(s)/Pollutant(s) Tested:
	Previously Submitted, Date:
	Test Date(s)/Pollutant(s) Tested:
	To be Submitted, Date (if known):
	Test Date(s)/Pollutant(s) Tested:
	Not Applicable     ■ The state of t
	Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7.	Other Information Required by Rule or Statute  Attached, Document ID: Not Applicable

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### **EMISSIONS UNIT INFORMATION**

Section [1] of [1]

### **Additional Requirements for Air Construction Permit Applications**

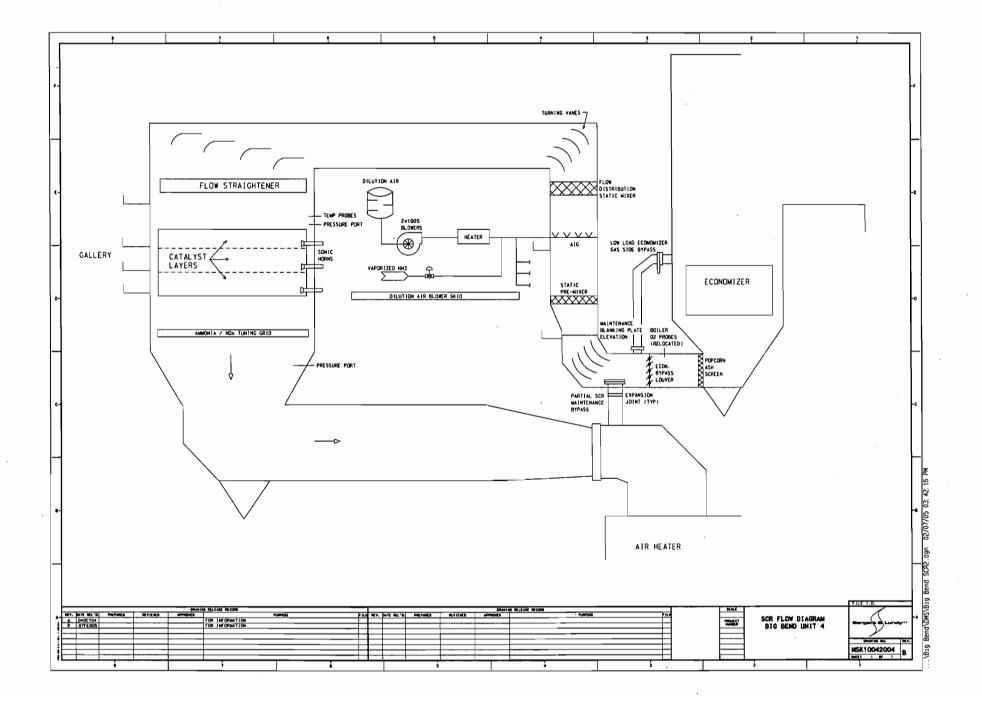
1.	Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
	☐ Attached, Document ID: ☐ Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and
	Rule 62-212.500(4)(f), F.A.C.)
	Attached, Document ID: Not Applicable
3.	Description of Stack Sampling Facilities (Required for proposed new stack sampling
	facilities only)  Attached, Document ID: Not Applicable
_	Iditional Requirements for Title V Air Operation Permit Applications N/A
1.	Identification of Applicable Requirements
_	Attached, Document ID: Previously Submitted, Date
2.	Compliance Assurance Monitoring
<u> </u>	Attached, Document ID: Previously Submitted, Date
3.	Alternative Methods of Operation  Attached, Document ID: Previously Submitted, Date
_	
4.	Alternative Modes of Operation (Emissions Trading)  Attached, Document ID: Not Applicable
5	Acid Rain Part Application
]	Certificate of Representation (EPA Form No. 7610-1)
	Copy Attached, Document ID:
	Acid Rain Part (Form No. 62-210.900(1)(a))
	Attached, Document ID:
	Previously Submitted, Date:
	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
	<ul><li>Attached, Document ID:</li><li>Previously Submitted, Date:</li></ul>
	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
	Attached, Document ID:
	Previously Submitted, Date:
	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
	Attached, Document ID:
	Previously Submitted, Date:
	Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
	☐ Attached, Document ID:
	☐ Previously Submitted, Date: ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
	Attached, Document ID:
	Previously Submitted, Date:
	Not Applicable

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# EMISSIONS UNIT INFORMATION Section [1] of [1] Additional Requirements Comment

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# ATTACHMENT A PROCESS FLOW DIAGRAM



### THE TAMPA TRIBUNE

### Published Daily Tampa, Hillsborough County, Florida

Supervisor of The Tampa Tribu attached copy of advertisement	ne, a daily newspaper published at Tampa in Hillsborough County, Florida; that the being a  LEGAL NOTICE
· · · · · · · · · · · · · · · · · · ·	LEGAL NOTICE
in the matter of	PUBLIC NOTICE OF INTENT
was published in said newspape	er in the issues of APRIL 15, 2005
_	
Florida, and that the said newspeach day and has been entered	The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, paper has heretofore been continuously published in said Hillsborough County, Florida, I as second class mail matter at the post office in Tampa, in said Hillsborough County, next preceding the first publication of the attached copy of advertisement; and affiant
Florida, and that the said newsp each day and has been entered Florida for a period of one year	paper has heretofore been continuously published in said Hillsborough County, Florida,
Florida, and that the said newsp each day and has been entered Florida for a period of one year	paper has heretofore been continuously published in said Hillsborough County, Florida, I as second class mail matter at the post office in Tampa, in said Hillsborough County, next preceding the first publication of the attached copy of advertisement; and affiant r paid nor promised any person, this advertisement for publication in the said newspape
Florida, and that the said newspeach day and has been entered Florida for a period of one year further says that she has neither Sworn to and subscribed by me	paper has heretofore been continuously published in said Hillsborough County, Florida, I as second class mail matter at the post office in Tampa, in said Hillsborough County, next preceding the first publication of the attached copy of advertisement; and affiant repaid nor promised any person, this advertisement for publication in the said newspaper.  The said newspaper is a said this provided in the said newspaper.  The said newspaper is a said this provided in the said newspaper.  The said Hillsborough County, Florida, I ample to the said Hillsborough County, I ample to the s

OFFICIAL NOTARY SEAL
SUSIE LEE SLATON
COMMISSION NUMBER
DD000080
MY COMMISSION EXP.
APRIL 16, 2009

## PUBLIC NOTICE OF INTENT . TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570039-020-AC

Tampa Electric Company Big Bend Station, Hillsborough County

Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Tampa Electric Company (TEC) for the Big Bend Station located at Big Bend Road, North Ruskin, Hillsborough County. The permit is for installation of a selective catalytic reduction (SCR) system on Steam Generators No. 4 for the reduction of omissions of nitrogen oxides (NOX). 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 applicant's mailing address is: Tampa Electric Company, P.O. Box 111, Tampa, Florida 33601-0111.

The SCR project is part of a larger program by TEC pursuant to a Consent Final Judgement (CFJ) with the Department and a Consent Decree (CD) with a Environmental Protection Agency to reduce emissions from its coal fired plants. There have been very substantial reductions of sulfur dioxide (SO2) to date primarily due to the installation of a scrubber on Units 1 and 2. Other NOx control projects including installation of Low NOx burners and separate overfire air were previously approved.

Previous projects have already reduced NOx emissions from Unit 4 from 0.40 pounds per million Btu of heat pump (lb/mmBtu) in 1998 to 0.22 lb/mmBtu in 2004. This air construction permit will establish the SCR project as an applicable requirement for subsequent incorporation into the facility Title V Operation Permit. For reference; the permit will include a limit of 0.10 pounds of NOX per million Btu of heat input (lb/mmBtu) from Unit 4.

The new NOx emissions limit is much less than the other applicable limits of 0.44 lb/mmBtu and 0.60 lb/mmBtu for the same unit under the Federal Acid Rain Program and the applicable New Source Performance Standard, Further control of NOx will reduce smog formation potential in the Tampa Bay area. SCR in combination with the existing scrubber in Unit 4 is also expected to reduce mercury emissions.

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 Stone Road, Mail Station #5505, Tallahassee, FI 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 120.559 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 informationsetforth below and must be filed (received) in the Office of General Counsel of the Department at 3900 C o m m o n w e a l t h 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 receipt of this notice or within fourteen days of receipt of this notice or within fourteen days of receipt of this 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 in 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 petitioner contends warrant reversal or modification! of the agency proposed action; (f) A statement of the specific rules; or statutes the petitioner, stating precisely the action precisely the 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

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 application have the right to petition 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:

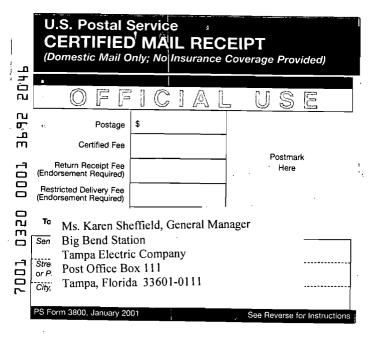
Dept. of Environmental Protection Bureau of Air Regulation Suite 4, 111 S. Magnolia Drive Tallahassee, Florida, 32301 Telephone: 850/488-0114 Fax: 850/922 6979

Dept. of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida, 33619-8218 Telephone: 813/744-6100 Fax: 813/744-6084

Hillsborough County Environmental Protection Commission Air Management Division 1410 North 21 Street Tampa, Florida 33605 Telephone: 813/272-5530

Telephone: 813/272-5530
Telephone: 813/272-5530
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 Casclo 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 wed wed at: www.dep.state.fl. us/Air/permitting/construction.htm in the power plant category.

9173 04/15/05



SENDER: COMPLETE THE	ATHIS SECTION ON DELIVERY
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Bureau of Air Regulation, NSR
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