



TAMPA ELECTRIC

October 19, 2006

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BUREAU OF AIR REGULATION

Mr. Thomas Cascio
Florida Department of
Environmental Protection
Division of Air Resource Management
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7985 2383 2570

**Re: Tampa Electric Company
Big Bend Station
Air Construction Permit Modification Project No.: 0570039-020-AC
Request to Modify the Big Bend Unit 4 SCR Air Construction Permit**

Dear Mr. Cascio:

Tampa Electric Company (TEC) submits a request for a revision to the Big Bend Station selective catalytic reduction (SCR) Air Construction Permit Number 0570039-020-AC. This request addresses a number of minor items in the current SCR air construction permit TEC believes can be improved through minor revisions and clarifications. The rationale for the changes is to ensure consistency with the SCR air construction permits for Big Bend Units 1 through 3. These requested modifications involve administrative issues, and do not affect the nature and character of the emissions from this facility. As such, this request is submitted as a permit modification to the SCR air construction permit in accordance with the Florida Department of Environmental Protection (Department) guidance.

The proposed SCR air construction permit changes address clarification of requirements during startup, shutdown, malfunction and low load operation.

As requested by the Department, the enclosed air construction modification application includes the following materials:

- (1) Attachment A: Completed Application for Air Permit - Long Form (Facility Information section only, including Responsible Official and Professional Engineer certifications);
- (2) Attachment B: Marked-up copy of the current air construction permit that contains the requested permit condition changes. For each permit condition change, the requested permit language (strikeout and/or additional text) is shown. The rationale for the changes is to ensure consistency with the SCR air construction permits for Big Bend Units 1 through 3.

TAMPA ELECTRIC COMPANY
P.O. BOX 111 TAMPA, FL 33601-0111

(813) 228-4111

AN EQUAL OPPORTUNITY COMPANY
HTTP://WWW.TAMPAELECTRIC.COM

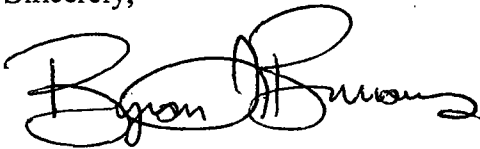
CUSTOMER SERVICE:
HILLSBOROUGH COUNTY (813) 223-0800
OUTSIDE HILLSBOROUGH COUNTY 1 (888) 223-0800

Mr. Thomas Cascio
October 19, 2006
Page 2 of 2

To facilitate the Department's review of this SCR air construction modification request, an electronic copy of the marked up Big Bend Unit 4 SCR air construction permit is also being submitted to you via e-mail. This electronic file of the complete SCR air construction permit shows the requested condition changes using highlighted formats (i.e., green strikeout for deleted text and green underline for added text).

TEC appreciates the cooperation and consideration of the Department in this requested air construction permit modification for Big Bend Station. Your expeditious processing of this request for a permit revision will be appreciated. If you have any questions or comments pertaining to this request, please direct them to Ms. Sharon Good at (813) 228-4654.

Sincerely,



Byron T. Burrows, P.E.
Manager - Air Programs
Environmental, Health & Safety

EHS/rk/SCG176

Enclosures

c/enc: Ms. Alice Harman, EPCHC
Mr. Jason Waters, FDEP SW
Mr. David Lloyd, EPA
~~Mr. Scott Sheplak, FDEP~~
Ms. Trina Vielhauer, FDEP
Mr. Sterlin Woodard, EPCHC

ATTACHMENT A



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for any air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also 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
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

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 & 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.

Identification of Facility

1. Facility Owner/Company Name: Tampa Electric Company	
2. Site Name: Big Bend Station	
3. Facility Identification Number: 0570039	
4. Facility Location... Street Address or Other Locator: 13031 Wyandotte Road City: Apollo Beach County: Hillsborough Zip Code: 33572	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Sharon C. Good, P.E., Senior Engineer	
2. Application Contact Mailing Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: FL Zip Code: 33601-0111	
3. Application Contact Telephone Numbers... Telephone: (813) 228-4654 ext. Fax: (813) 228-1308	
4. Application Contact Email Address: <u>scgood@tecoenergy.com</u>	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit (revision).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Tampa Electric Company (TEC) was issued an air construction permit (Permit No. 0570039-020-AC) dated May 6, 2005 to install and initially operate a selective catalytic reduction (SCR) nitrogen oxides control system on Big Bend Station Unit No. 4.

This application requests several minor revisions to Air Construction Permit No. 0570039-020-AC, and corresponding changes to Permit No. PSD-FL-040. A marked-up copy of Air Construction Permit No. 0570039-020-AC showing the requested permit condition changes is provided in Attachment B.

APPLICATION INFORMATION

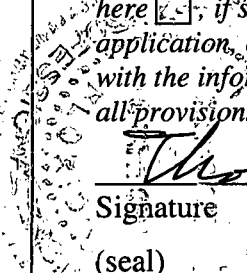
Application Responsible Official Certification N/A

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):			
<input type="checkbox"/> 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.			
<input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively.			
<input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.			
<input type="checkbox"/> The designated representative at an Acid Rain source.			
3. 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:			
<p><i>I, the undersigned, am a responsible official of the Title V source 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 applicable requirements identified in this application to which the Title V source 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. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i></p>			
_____ Signature		_____ Date	

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Thomas W. Davis Registration Number: 36777
2. Professional Engineer Mailing Address... Organization/Firm: Environmental Consulting & Technology, Inc. Street Address: 3701 Northwest 98th Street City: Gainesville State: Florida Zip Code: 32606-5004
3. Professional Engineer Telephone Numbers... Telephone: (352) 332-0444 ext. Fax: (352) 332-6722
4. Professional Engineer Email Address: tdavis@ectinc.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , 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.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> , 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 <input type="checkbox"/> , 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.</i> <i>(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 <input type="checkbox"/> , if so); 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 contained in such permit.</i>  <u>Thomas W. Davis</u> Signature Date <u>9/26/06</u> (seal)

*Attach any exception to certification statement.

APPLICATION INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

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 Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Karen Zwolak, Senior Environmental Consultant
2. Facility Contact Mailing Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: Florida Zip Code: 33601-0111
3. Facility Contact Telephone Numbers: Telephone: (813) 228-4111 ext. Fax: (813) 228-1308
4. Facility Contact Email Address: <u>kozwolak@tecoenergy.com</u>

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 Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

APPLICATION INFORMATION

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

APPLICATION INFORMATION

List of Pollutants Emitted by Facility

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

APPLICATION INFORMATION

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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: Jan 2005
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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: Oct 2004

Additional Requirements for Air Construction Permit Applications N/A

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input type="checkbox"/> Attached, Document ID: _____
3. Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

APPLICATION INFORMATION

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 (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications N/A

1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable (revision application)

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 (revision application with no change in applicable requirements)

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

ATTACHMENT B

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 _x Reduction (SCR)
Tampa, Florida 33601-0111		Steam Generator Unit 4
	SIC No.	4911
<i>Authorized Representative:</i>	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_x) 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/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), 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_x 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 (SO₃) control system such as alkali injection downstream of the Unit No. 4 preheater.
- Assessment of combined effects of SCR and previous NO_x 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. Terminology. The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code (F.A.C.).

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

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

A.6. New or Additional Conditions. For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

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

APPLICABLE STANDARDS AND REGULATIONS

A.8. Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S., and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297.

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

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

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

A.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. Circumvention. The owner or operator shall not circumvent the air pollution control equipment nor operate the SCR equipment in such a manner which would violate allowable emission rates stated herein, notwithstanding the conditions provided in A.15.1. [Rules 62-210.650, F.A.C.]

~~**A.14.** Circumvention. The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [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.]

SCR OPERATION

A.15.1 The permittee shall operate the SCR system in accordance with the SCR system suppliers' recommendations, including operating the SCR between minimum and maximum operating temperatures.

A.15.2. The partial SCR maintenance bypass duct is normally closed except during maintenance periods.

A.15.3. Abnormal events: "Abnormal events" are defined as an unanticipated interruption, malfunction, or failure of the pipeline or associated equipment utilized to supply ammonia to the Big Bend Station for use in the operation of the selective catalytic reduction control system. Excess emissions occurring from operation of the boilers during an abnormal event are authorized provided that best operational practices are employed to minimize the amount and duration of the emissions during an abnormal event. Emissions data collected during "abnormal events" may be excluded from the 30-day rolling compliance averages in accordance with this condition.

EMISSION LIMITS AND STANDARDS

~~A.16. After May 31, 2007 NO_x emissions (reported as NO₂) from Unit No. 4 when combusting solid fuel bituminous or anthracite coal, or a coal/petroleum coke blend, shall not exceed 0.10 lb/million Btu heat input on a heat input weighted 30-day rolling average basis. 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 the definition of "emission rate" so that an equation is used that divides total pounds of NO_x by total heat input in each 30-day period to reach a 30-day rolling average.~~

~~[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; and E-mail memorandum from EPA received on September 15, 2005.]~~

~~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 heat input weighted average of all hourly emission rates for NO_x for the 30 successive boiler operating days, except for data obtained during startup, shutdown, malfunction, or abnormal events~~Compliance is determined by calculating the arithmetic average of all hourly emission rates for NO_x 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 (NH₃) slip limit shall be determined using EPA conditional test method (CTM-027), EPA method 320, or other methods approved by the Department. [Rule 62-4.070(3), F.A.C.]

A.20. Compliance with the allowable emission limiting standards for ammonia slip 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 heat input weighted 30-day rolling average~~ NO_x limit of 0.10 lb/mmBtu shall be demonstrated using CEMS data beginning July 1,

2007 (or 30 boiler operating days after June 1, 2007), and every 30 ~~calendar~~ boiler operating days thereafter. [0570039-017-AV.]

A.22. Test Results. Compliance test results shall be submitted to the Environmental Protection Commission of Hillsborough County and the Department no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.]

NOTIFICATION, REPORTING, AND RECORDKEEPING

A.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.]