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DIVISION OF AIR  
RESOURCE MANAGEMENT

December 27, 2012

Jeffery F. Koerner, Program Administrator  
Florida Department of Environmental Protection  
Division of Air Resource Management  
Office of Air Permitting and Compliance  
2600 Blair Stone Road, M.S. 5505  
Tallahassee, Florida 32399-2400

Via Fedex  
Airbill No. 7943-9710-4620

**Re: Tampa Electric Company**

**Big Bend Station - Facility ID No. 0570039**

**Request for Additional Information**

**Consent Decree (Civil Action No 99-2524-T-23F) Related Permit Revisions**

**Project Nos. 0570039-060-AC, 0570039-061-AV**

Dear Mr. Koerner:

On October 18, 2012, Tampa Electric Company (TEC), submitted an application to the Florida Department of Environmental Protection (FDEP) request an air construction permit/Title V revision. The application requests permitting revisions to document the closure of U.S. EPA Consent Decree requirements, authorize additional transloading of coal, petroleum coke and slag, and authorize firing natural gas during startup and shutdown.

On December 5, 2012, TEC received a correspondence from FDEP requesting additional information (RAI). The RAI specifically requests: 1) the origin of the Consent Decree/consent final judgment requirements in the current Title V permit 0570039-054-AV; 2) mid-2011 correspondence from the Department of Justice (DOJ) and Environmental Protection Agency (EPA) outlining the outstanding requirements for the closure of the Consent Decree; and 3) a revised compliance plan (CP-1) documenting any remaining Consent Decree requirements. TEC's responses comments 1 to 3 are discussed below.

**FDEP Comment 1**

*In the referenced submittal, requested revisions were made to air permits associated with the TECO/U.S. EPA Consent Decree. The specific requested changes to air permits were included in an attachment to the EPSAP (Electronic Permit Submittal and Processing System) in Pages 1-4 of the letter dated October 16, 2012 attached to the application. Please provide the underlying origin of each permit condition (i.e., air construction (AC) Permit Nos., Consent Decree, and/or Consent Final Judgment) from which each permit condition originated. Permit conditions originating from an AC permit are changed by revising the applicable AC permit.*

**TEC Response 1**

The table below shows the origin of the permit conditions and relevant paragraph of the applicable Consent Decree requirements. The recent quarterly Consent Decree report (3<sup>rd</sup> Quarter 2012) summarizes the completion of the Consent Decree requirements with exception of the Unit 1 and Unit 3 electrostatic precipitator (ESP) requirements. In addition, the DOJ and EPA have requested permitting revisions to

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incorporate the calculation of the heat weighted 30 day rolling average, startup/shutdown and synchronization to the grid. TEC requests the aforementioned information, PM limitation in permit 0570039-017-AV and revised compliance plan be incorporated into one comprehensive air construction permit to capture the applicable requirements of the Consent Decree.

#### Consent Decree Requirements and Permitting Summary

Permit Condition	Permit Origin	Consent Decree Reference
Authorized construction Low NO <sub>x</sub> burner for Units 1 to 4 and SOFA on Unit 4	NO <sub>x</sub> Reduction 0570039-014-AC September 28, 2004	Paragraph 52
Authorized construction of Unit 4 SCR. Condition A.16 specifies the emission rate shall not exceed 0.10 lb/mmBtu NO <sub>x</sub> after May 31, 2007	Unit 4 SCR 0570039-020-AC May 6, 2005	Paragraph 37
Authorized construction of Unit 3 SCR. Condition A.16 specifies the emission rate shall not exceed 0.12 lb/mmBtu NO <sub>x</sub> after April 30, 2008.	Unit 3 SCR 0570039-022-AC November 10, 2005	Paragraph 37
Authorized construction of Unit 1 & 2 SCR. Condition A.16 specifies the emission rate shall not exceed 0.12 lb/mmBtu NO <sub>x</sub> after April 30, 2009 for Unit 2 and after April 30, 2010 for Unit 1.	Units 1 & 2 SCR 0570039-024-AC March 30, 2006	Paragraph 37
Authorized the construction of the duct split on Units 3 & 4. Unit 3 is no longer able to bypass the FGD system.	Unit 3 & 4 Duct Split 0570039-030-AC 0570039-031-AC October 31, 2007	Paragraph 30
Authorized the Consent Decree requirements. <ul style="list-style-type: none"> <li>• Condition A.7 specified the emission rate shall not exceed 0.03 lb/mmBtu PM for Units 1 to 3.</li> <li>• Condition A.8 specified the PM emission rates as 530, 525, and 541 tons per year.</li> <li>• Condition A.35/A.36 specified the Unit 1 to 3 shall operate with LNB.</li> <li>• Condition B.5 specified the emission rate shall not exceed 0.01 lb/mmBtu PM for Unit 4 and 190 tons per year.</li> <li>• Conditions B.68/B.69 specified the Unit 4 shall operate with LNB and SOFA</li> </ul>	0570039-017-AV (Title V renewal) December 30, 2004	Paragraph 32, BOP
Authorized addition Consent Decree requirements. <ul style="list-style-type: none"> <li>• Conditions A.21/A.22 specified the emission rate meet the 95% removal efficient or 0.25 lb/mmBtu SO<sub>2</sub>.</li> <li>• Conditions A.23/A.24 specified the emission rate shall not exceed 0.12 lb/mmBtu NO<sub>x</sub> for Units 1 to 3.</li> <li>• Condition B.21 specified the emission rate shall exceed 0.10 lb/mmBtu NO<sub>x</sub> for Unit 4</li> <li>• Included compliance plan (CP-1) Consent Decree work yet to be completed.</li> </ul>	0570039-039-AV (Title V renewal) December 17, 2009	Paragraph 30, 34, 37,52, 0570039-020-AC 0570039-022-AC 0570039-024-AC
Authorized construction of Unit 3 ESP specified in the compliance plan (CP-1)	0570039-058-AC September 18, 2012	Paragraph 32, BOP, CP
Requested changes to air permits to calculating the 30 day rolling average including provisions for startup/shutdown and synchronizing to the grid. (See Pages 1-4 of the letter dated October 16, 2012).	0570039-060-AC Pending	2 <sup>nd</sup> Amendment, CP
Unit 1 ESP modifications requirements		Paragraph 32, BOP, CP

**FDEP Comment 2**

*Per discussions with your representatives, please provide the communication from mid-2011 from EPA that detailed the compliance status of each requirement in the Consent Decree so we can determine the remaining tasks to include in the updated compliance and so that we can determine if any further construction permits are required.*

**TEC Response 2**

On July 18, 2011 in response to TEC's letter (dated May 20, 2011) requesting closure of the Consent Decree, the DOJ issued a letter objecting to the closure of Consent Decree due to a NO<sub>x</sub> limit violation, outstanding ESP projects and the calculation of NO<sub>x</sub> emissions rate under the facility's permit (See Attachment A).

The NO<sub>x</sub> limit violation

The alleged NO<sub>x</sub> limit violation was an exceedance of the Big Bend Unit 2 NO<sub>x</sub> emission rate in 2009 during a coal pluggage event. The DOJ/EPA indicated that they would consider this alleged violation closed if the TEC and EPC agency reached a resolution. EPC reviewed the case and decided to close the case without any further action. On August 4, 2011, EPC submitted a correspondence closing the case. It was also verbally agreed that the EPA/DOJ would not pursue further action regarding the alleged violation if TEC would revise the calculation of the NO<sub>x</sub> emissions rate under the facility's permit. The subject permitting action is intended to fulfill this DOJ & EPA request. A copy of EPC's closure letter is attached (See Attachment B).

Completion and Operation of Certain Electrostatic Precipitator Projects

The BACT and BOP outlined the ESP work requirements to achieve a 0.03 lb/mmBtu emission rate for Units 1 to 3 and 0.01 lb/mmBtu for Unit 4. In a letter dated January 13, 2006, TEC submitted a revised table to the EPA outlining the remaining the work requirements. EPA responded with an approval of the BOP plan and revised work schedule (dated January 27, 2006). The revised schedule was subsequently included to the Appendix CP-1 of the Title V renewal permit (0570039-039-AV). All of the revised work is expected to be completed no later than December 31, 2015.

As previously stated in the letter submitted on October 7, 2005, it was not TEC's intent to implement those changes on a strict schedule, but rather as the condition of the equipment dictates and as opportunity allows. The revised schedule in Section 3.3 and current title V permit (0570039-054-AV) are based upon current ESP inspections and future outage schedules. The estimated schedule can be revised and the work may be performed earlier or later depending on such factors as ESP performance, equipment condition, outage duration, safety issues, specific unit operating parameters, and system demand. To meet the closure requirements, the project schedule will be revised and include a provision that all work shall be completed by December 31, 2015. The revised compliance plan, which is provided in the Response 3, will be incorporated into one comprehensive air construction permit and included in the Title V permit to capture the applicable requirements of the Consent Decree.

Calculation of the NO<sub>x</sub> 30-day rolling Average

The facility's permit-specified method allows the allows the exemption of emissions from startup, shutdown, and malfunction in calculating 30 day rolling average limits (see condition B21) as provided by current Clean Air Act regulations. The Consent Decree calculation procedure does not allow for such exclusions. The subject application requests modification of the permit to comport with Consent Decree and includes a 30-day heat input-weighted rolling average and includes startup and shutdown periods up to 5 events during the averaging periods as described in the application. Furthermore, all applicable

Mr. Jeffery F. Koerner  
December 27, 2012  
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emissions and heat input measurements shall commence from the time the Unit is synchronized with the electric distribution system through the time that the unit ceases to be synchronized with the electric distribution system.

**FDEP Comment 3**

*The current valid Title V air operation permit, Permit No. 0570039-054-AV includes a Compliance Plan (Appendix CP-1, attached). It was prepared circa 2009 regarding activities (work) to be completed under the TECO/U.S. EPA Consent Decree. Please provide your proposal for updating compliance plan so that it can be attached to the air permits and (together with the AC's) replace the Consent Decree. Include any additional AC permit applications that need to be submitted.*

**Response 3**

The proposed updated compliance plan documenting the completed and remaining work is provided in Attachment C.

TEC believes the additional information provided herein is sufficient to meet the requirements of Rule 62-4 F.A.C. for the closure of the Consent Decree. It is requested that the FDEP continue to process the air construction permit application in a timely manner.

Please contact me at (813) 228-4232 or Byron Burrows at (813) 228-1282, if you have any questions or comments.

Sincerely,



for

Robert A. Velasco, P.E., BCEE, QEP  
Air Programs  
Environmental, Health & Safety

EHS/iym/ RAV182 Consent Decree RAI permits 060 & 061

Enclosures

cc Scott Sheplak, DEP  
Kelly Boatwright, DEP  
Diana Lee, EPCHC

**Attachment A –**

**Department of Justice Letter, dated July 18, 2011**



U.S. Department of Justice  
Environmental Enforcement Section  
P.O. Box 7611  
Washington, D.C. 20044-7611

*Thomas A. Mariani, Jr.*  
Assistant Chief

*tom.mariani@usdoj.gov*  
Telephone (202) 514-4620  
Facsimile (202) 616-6584

July 18, 2011

By email ([maproulx@tecoenergy.com](mailto:maproulx@tecoenergy.com)) and U.S. Mail

Megan Proulx  
Corporate Counsel  
TECO Energy  
P.O. Box 111  
Tampa, FL 33601-0111

RE: Response to Tampa Electric's May 20 Letter Stating Compliance with Consent Decree

Dear Megan:

Thank you for your letter of May 20, 2011. We look forward to our conference call set for the afternoon of July 19; in the meantime, both to round out items for discussion on July 19 and to meet consent decree timing requirements, the United States now objects to the May 20 certification letter. I anticipate both parties will work on these issues as they have on past ones, and I hope that we are as successful in resolving these differences as we have others.

Bases for the objection (and items we hope we can discuss on July 19) include the areas listed below (and flagged in our prior email exchanges). In identifying them for further discussion with you, we were guided in part by paragraph 87 of the Consent Decree, which describes the performance necessary to warrant termination.<sup>1</sup>

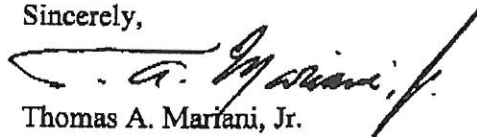
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<sup>1</sup> Para. 87: Except as provided in Paragraphs 43, 44, and 45 (involving resolution of claims), this Consent Decree shall be subject to termination upon motion by either party after Tampa Electric satisfies all requirements of this Consent Decree, including payment of all stipulated penalties that may be due, installation of control technology systems as specified herein, the receipt of all permits specified herein, securing valid Title V Permits for Gannon and Big Bend that incorporate all emission and fuel limits from this Consent Decree as well as all operational limits established under this Consent Decree, and the submission of all final reports indicating satisfaction of the requirements for implementation of all acts called for under Part VII of this Consent Decree.

- 1) NOx limit violation. I understand that Hillsborough County may be following up with Tampa Electric on violation of a NOx limit that is a violation of the consent decree limit as well. If it turned out that Tampa Electric resolved that matter with Hillsborough County on an appropriate basis, the United States could take that resolution into account in assessing propriety of termination here. You noted that the local authority may have elected to excuse the exceedance under its requirements. If the local authority excused the matter, we would consider why that authority did so. Typically this kind of exceedance is a violation that triggers stipulated penalties regardless of the reason for the exceedance (though something like force majeure might apply in appropriate circumstances). If the local authority elected not to collect an appropriate penalty, then we would want to consider why the authority took that course. In the meantime the United States demands the stipulated penalties due for the NOx violations.
- 2) Completion and Operation of Certain Electrostatic Precipitator Projects: It appears that under a deliverable required by the consent decree, Tampa Electric is to finalize and implement a BOP plan that will improve operation of Electrostatic Precipitators. EPA advises that page 16 of the approved plan (the October 2005 version) includes a table listing a number of Electrostatic Precipitator projects to be completed (some had already been completed) by estimated dates. Tampa Electric submitted the table to EPA with a letter dated January 13, 2006, signed by Byron Burrows. EPA responded with an approval of the BOP plan (dated January 27, 2006). I understand from your follow-up information that this work is part of the facility's Title V compliance plan. We would like to discuss with you the status of these projects and how Tampa Electric sees the compliance plan in relation to the consent decree requirements.
- 3) Does calculation of NOx emissions under the facility's permit conform to the decree-specified method? The facility's permit-specified method appears to differ from the decree-required approach; the permit seems to allow exemption of emissions from startup, shutdown, and malfunction in calculating 30 day rolling average limits (see condition B21). The consent decree, in general, does not allow for such exclusions, I believe.

Thank you for your attention to these matters. We look forward to speaking with you by telephone on Tuesday, July 19 at 3pm eastern time. Here is a conference call line we can use: 866-410-9426 and code: 2025144620.

Sincerely,



Thomas A. Mariani, Jr.

Cc: Kono, Lloyd, Burke

**Letter to M. Proulx regarding Tampa Electric Consent Decree (from T. Mariani) 7.18.2011**

**Attachment B –**

**NOx Emission Closure Letter, dated August 4, 2011**



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Environmental, Health  
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August 4, 2011

Mr. Byron Burrows, Manager  
Environmental, Health & Safety  
Tampa Electric Company  
P.O. Box 111  
Tampa, FL 33601-0111

RE: Case Closed  
Case No. 10-0120AR0039

Dear Mr. Burrows:

The Environmental Protection Commission staff has reviewed the referenced case and we are closing it at this time without any further action. We have notified both DEP and EPA that you will discuss the NOx issue with EPA. All remaining issues associated with the above case are resolved.

By receipt of this notice, be informed that the case noted above has been closed. Please be advised that this notice in no way absolves your facility from the responsibility to observe all applicable regulations and that future violations may result in enforcement action.

Thank you for your cooperation.

Sincerely,

Jerry Campbell, P.E., Director  
Air Management Division

cc: Cynthia Falandysz, DEP-SW

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AN AFFIRMATIVE ACTION – EQUAL OPPORTUNITY EMPLOYER

**Attachment C –  
Proposed Consent Decree Compliance Plan**

## **Proposed Consent Decree Compliance Plan**

### **1.0 INTRODUCTION**

This compliance plan has been developed to describe how Tampa Electric Company's (TEC) commitment to complete the remaining portions of the Consent Decree (CD) (Civil Action No. 99-2524-T-23F) requirements at Big Bend Station will be performed. The plan for compliance with the many conditions in the Consent Decree has already been determined and submitted to the EPA as outlined in the 3<sup>rd</sup> quarter 2012 consent decree report. In addition, a summary of the completion status of other relevant CD requirements are provided below.

### **2.0 COMPLETION OF CONSENT DECREE REQUIREMENTS**

#### **A. Information With Respect to Gannon Station**

1. Re-Powering Activities pursuant to Paragraphs 26 or 27.

Bayside Unit 1 became commercially operational on April 24, 2003. Bayside Unit 2 became commercially operational on January 15, 2004.

2. Shutdown of Gannon Power Station pursuant to Paragraph 27.

Repowering activities are complete and the required deadlines have been satisfied. Gannon Units 5 and 6 were shutdown on January 30, 2003 and September 30, 2003, respectively. Gannon Units 1 and 2 were shutdown on April 16, 2003 and April 15, 2003, respectively. Gannon Units 3 and 4 were shutdown on November 1, 2003 and October 12, 2003 respectively. Fuel will not be burned in these boilers without first obtaining the necessary PSD permits.

3. Coal or Fuel Usage following January 1, 2005.

No fuel other than natural gas has been burned at Gannon or Bayside Power Station after January 1, 2005.

#### **B. Information With Respect to Big Bend Station**

1. Unscrubbed emissions pursuant to the requirements of Paragraphs 29, 30, 31, and 40:

Tampa Electric has complied with the provisions of Paragraphs 30 and 31 through the implementation of Phases I and II of the Flue Gas Desulfurization (FGD) Optimization Plans submitted in 2001 and approved by EPA. Units 1 through 4 have dedicated scrubbers and can no longer have unscrubbed emissions. Requirements of Paragraph 40 of the Consent Decree are no longer applicable.

2. Electrostatic Precipitators ("ESPs") upgrade pursuant to Paragraph 32.B:

Tampa Electric and its consultants have completed the Best Operating Practices (BOP) study and BACT analysis of the ESPs. These plans were submitted to EPA on September 28, 2001.

Tampa Electric received a letter of approval for both the BOP and the BACT on June 19, 2003. Tampa Electric will continue to comply with the BACT emission rate approved by the EPA beginning May 1, 2004 as mandated by the Consent Decree.

The table below lists the BACT modifications for Big Bend Units 1 through 4, which have been implemented at Tampa Electric to date:

Big Bend Unit 1	Upgraded Flyash Gate Valves, Upgraded/New Flyash Controls, Installed ESP Controls, Installed Independent DCU, Balanced/Verified Temperature/Flows
Big Bend Unit 2	Upgraded Flyash Gate Valves, Upgraded/New Flyash Controls, Installed ESP Controls, Installed Independent DCU, Balanced/Verified Temperature/Flows
Big Bend Unit 3	Upgraded Flyash Gate Valves, Upgraded/New Flyash Controls, Installed ESP Controls, Installed Independent DCU, Balanced/Verified Temperature/Flows
Big Bend Unit 4	Upgraded Flyash Gate Valves, Upgraded/New Flyash Controls, Installed ESP Controls, Installed Independent DCU, Balanced/Verified Temperature/Flows

3. ESPs Operation pursuant to Paragraphs 32.A and 32.C:

As indicated above, Tampa Electric received approval for both reports on June 19, 2003. On August 18, 2003, Tampa Electric began operating in accordance with the BOP study. The table below lists Tampa Electric's implementation of the BOP at Big Bend Station to date:

Big Bend Unit 1	Optimized internal flows, Optimized rappers, Installed new hopper baffles, Installed slag tank vent fans*, Installed electrical cutouts
Big Bend Unit 2	Replaced new transformer/rectifier (T/R) sectionalizations, Installed wide plate spacing & rigid discharge electrodes, Installed slag tank vent fans*, Optimized rappers, Installed electrical cutouts, Installed new hopper baffles
Big Bend Unit 3	Optimized rappers
Big Bend Unit 4	Optimized rappers

A revision of the BOP study was submitted on October 29, 2004, following the completion of the

modifications recommended in the BACT analysis. Tampa Electric received approval for the revised BOP on February 13, 2006 and continues to operate each ESP in conformance with the revised BOP since before August 12, 2006.

As recommended in the BOP, the slag tank vent fans on Big Bend Units 1 and 2 were installed to vent combustion gases from the slag tank collection system back into the boiler. Between 2003 and 2006 the boiler windboxes were modified and combustion improvements were made resulting in dramatically reduced levels of unburned carbon in the slag tank vent lines. Due to the improvement of the slag tank gases, the slag tank vent fans were deemed no longer necessary, and the slag tank gases are now vented to the precipitator. Since the fans were removed from service no increases in opacity or particulate emissions have been detected.

#### 4. Early NO<sub>x</sub> reduction goals pursuant to Paragraph 35:

On February 23, 2001 Tampa Electric submitted the Early NO<sub>x</sub> Reduction Plan as required by Paragraph 35 of the Consent Decree and on March 8, 2001 EPA approved that Plan.

In the spring of 2001, Tampa Electric modified the burners and coal nozzles serving Big Bend Unit 1 and also installed a combustion optimization neural network on Big Bend Unit 2. During the second and third quarters of 2001, the effects of these technologies on NO<sub>x</sub> emissions were evaluated. On December 13, 2001, Tampa Electric submitted a report to EPA detailing the effectiveness of each technology in reducing NO<sub>x</sub> emissions from each boiler. Based on the results of the evaluation, Tampa Electric installed low NO<sub>x</sub> burners of similar design on Big Bend Units 2 and 3. Tampa Electric has since optimized the low NO<sub>x</sub> burners on Big Bend Units 1 and 2 and continues to optimize the low NO<sub>x</sub> burners on Unit 3 with emphasis upon ensuring safe operating conditions.

Efforts to continue utilization of the Unit 2 neural network combustion system were not successful. The equipment supplier was acquired by a competitor and technical support for the system is no longer available, therefore this operation was discontinued.

In addition to low NO<sub>x</sub> burners on all units and the neural network on Unit 2 (see note above), Tampa Electric installed real-time coal and airflow monitoring instrumentation and coal balancing equipment on Big Bend Unit 1. As stipulated in amended Paragraph 35 of the Consent Decree, Tampa Electric submitted a report to EPA detailing the performance of each technology in reducing NO<sub>x</sub> emissions from each boiler on June 30, 2004.

Evaluations of the real-time coal and airflow monitoring instrumentation on Unit 1 and Unit 2 were conducted. The evaluations indicated that their effectiveness to reduce NO<sub>x</sub> emissions on the Riley Turbo Wet Bottom boiler is negligible. As such, Tampa Electric has pursued other combustion modifications beyond those required by the Consent Decree such as windbox modifications and enhanced secondary air controls. These modifications have proven to be more effective in reducing NO<sub>x</sub>. The real-time coal and airflow monitoring instrumentation on Unit 1 and Unit 2 are no longer in service.

#### 5. PM Continuous Emission Monitors (“CEM”)

Tampa Electric installed a PM CEM on the stack serving Big Bend Units 3 and 4, known as Common Stack 3, on February 27, 2002. Following the Unit 3 and Unit 4 duct split completion

in December 2007, the stack previously referred to as Common Stack 3 is now fully dedicated to Big Bend Unit 3. During Quarter 1, 2009, Tampa Electric installed a second PM CEM in accordance with Paragraph 32.G of the Second Amendment to the Consent Decree on BB04 serving Unit 4. The second PM CEM was certified during Quarter 3, 2009. During Quarter 3, 2010, Tampa Electric installed a replacement PM CEM in accordance with Paragraph 32.E of the Second Amendment to the Consent Decree on BB03 serving Unit 3. The replacement PM CEM was certified during Quarter 4, 2010. Following the certification of the replacement PM CEM, the installed PM CEM on stack BB03 now serving Unit 3 was discontinued and removed during Quarter 1, 2011 in accordance with subparagraph 32.E of the Consent Decree.

#### 6. PM CEM data and results of any stack tests

Tampa Electric developed a test program to determine the feasibility of sustaining the continuous operation of the PM CEM. The test program used EPA's proposed performance specification-11 (PS-11) to determine if there is a correlation between stack test data and PM CEM data. The first round of stack testing was conducted during the week of June 17, 2002. The second round of stack testing was conducted during the week of January 13, 2003. The third round of stack testing was conducted during the week of June 16, 2003. The final round of stack testing was conducted during the week of March 15, 2004. In correspondence dated July 28, 2003, the decision as to the feasibility of the PM CEM was made 180 days after the two-year demonstration period or the final round of PM CEM stack testing, which expired September 15, 2004. Tampa Electric submitted the PM CEM Feasibility Report on September 14, 2004. Based upon the performance of the PM CEM and the results of the test program, Tampa Electric determined the PM CEM to be infeasible due to readings which are inconsistent with Reference Method 5B and the inability to suitably pass the proposed and promulgated PS-11 criteria. Tampa Electric submitted additional information and RTI Report responses to EPA on February 7, 2005, March 10, 2005 and July 14, 2005. Tampa Electric ultimately agreed to and fulfilled a new compliance schedule for installation of a second PM CEM and a replacement PM CEM to the original unsuccessful unit. The 2<sup>nd</sup> Amendment to the Consent Decree was published in the Federal Register on April 24, 2008. No public comments were received and the 2<sup>nd</sup> Amendment was signed on June 12, 2009.

Following the Unit 3 and Unit 4 duct split completed December 2007, the stack previously referred to as Common Stack 3 is now fully dedicated to Big Bend Unit 3. In 2009, TEC received approval from the EPA to discontinue operation pending the installation and certification of the 2<sup>nd</sup> PM CEM in 2009.

On March 23, 2009, TEC submitted the Data Collection Plan for the second PM CEMS to be installed and certified on Big Bend Power Station stack BB04 serving Big Bend Unit 4 according to Paragraph 32G of the 2<sup>nd</sup> Amendment to the Consent Decree. On July 16, 2009, TEC completed the installation and certification of the Second PM CEM on stack BB04 serving Unit 4.

On September 9, 2010, TEC submitted the Data Collection Plan for the replacement PM CEMS to be installed and certified on Big Bend Power Station stack BB03 serving Big Bend Unit 3 according to Paragraph 32E of the 2<sup>nd</sup> Amendment to the Consent Decree. On December 10,

2010, TEC completed the installation and certification of the Second PM CEM on stack BB03 serving Unit 3.

The completion of certification and correlation testing of the PM CEM serving Big Bend Unit 3 Tampa Electric marks the completion of all milestones associated with Paragraph 32 of the Consent Decree.

7. NO<sub>x</sub> emission controls at Big Bend Units 1 - 4 pursuant to Paragraphs 37.A or B, and 39

Tampa Electric advised EPA in correspondence dated August 19, 2004 of the decision to continue to combust coal in each of the units at Big Bend Station and as such will comply with the applicable provisions of the Consent Decree associated with this decision. Tampa Electric received SCR Air Construction permits from the Florida Department of Environmental Protection for Units 1-4. The installation of the SCR on Unit 4 was completed and began continuous operation on May 26, 2007.

Completion of the Unit 3 and Unit 4 duct split occurred on December 2007 and the stack previously referred to as Common Stack 3 is now fully dedicated to Big Bend Unit 3 and Common Stack 2 is now fully dedicated to Big Bend Unit 4. EPA was notified that the nomenclature change was official on January 1, 2008.

On March 4, 2008, Tampa Electric notified EPA via letter, pursuant to Paragraph 57 of Civil Action No. 99-2524 Civ-T-23F (Force Majeure Event), complying with portions of the referred Consent Decree would be delayed. The letter stated that TEC anticipated a delay in the commencement of the operation of the emission control equipment due to unforeseen damage to the steam turbine rotor. TEC exercised due diligence to minimize the potential length of delay. Details of the circumstances surrounding the Force Majeure Event can be found in the Notification Letter to the EPA dated March 4, 2008. After the outage and subsequent start-up period Unit 3 has demonstrated compliance.

The installation of the SCR on Unit 3 was completed and Big Bend Unit 3 began continuous operation on June 1, 2008. The installation of the SCR on Unit 2 was completed and began operation on May 1, 2009. The installation of the SCR on Unit 1 was completed and began operation on May 1, 2010. The completed installation of the SCR on Unit 1 marks the completion of all milestones associated with Paragraph 37.

**C. Other Requirements**

1. Payments made pursuant to Paragraph 52.B

TEC has satisfied the \$2 million payment requirement in support of the Air Chemistry Work in Tampa Bay Estuary.

2. NO<sub>x</sub> reduction and/or demonstration project(s) pursuant to Section VII (Paragraph 52.C)

In accordance with paragraph 52.C, Tampa Electric submitted an electronic request to EPA on November 14, 2001 to install a neural network based intelligent sootblowing project on Big Bend Unit 2 in 2002 as an innovative NO<sub>x</sub> control project. Tampa Electric received EPA approval for the project on April 24, 2002. The project completion date was December 31, 2004.

As a result of the systems' poor performance and the lack of technical support from manufacturer it was removed from service.

In addition, Tampa Electric submitted a request to EPA on March 7, 2003 to install separated over fired air (SOFA) on Big Bend Unit 4 in 2003 and to include Big Bend Unit 4 low NO<sub>x</sub> burners as a comprehensive NO<sub>x</sub> control project in accordance with Paragraph 52.C. In April 2006, EPA granted approval of the use of the Big Bend Unit 4 projects to satisfy the Paragraph 52.C. early NO<sub>x</sub> reduction projects. On November 21, 2008, TEC submitted the Big Bend Station Unit 4 Consent Decree NO<sub>x</sub> Reduction Results Report outlining the early NO<sub>x</sub> reductions on Unit 4, satisfying the requirements of Paragraph 52.C. TEC completed the NO<sub>x</sub> mitigation projects required under Consent Decree Paragraph 52.C NO<sub>x</sub> Reduction Projects, through the early installation of the LNB and SOFA combustion improvements. TEC satisfied all of the NO<sub>x</sub> emission reduction requirements of Paragraph 52.C of the Consent Decree. These projects secured significant reductions earlier than 2010 deadline set by the Consent Decree for commencement of operation of such projects.

3. Permit applications submitted to an approval authority

All permit applications and final permits pertaining to Big Bend and/or Gannon Stations have been submitted to FDEP.

**3.0 CURRENT OUTSTANDING CONSENT DECREE PROVISIONS**

Section 32D - The current schedule is based upon current ESP inspections and future outage schedules. The schedule can be revised and the work may be performed earlier or later depending on such factors as ESP performance, equipment condition, outage duration, safety issues, specific unit operating parameters, and system demand.

<b>Project</b>	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>
Wide plate spacing and rigid electrodes	2014/2015	C	2013	N/A
Increased T/R sectionalization	N/A	C	2013	N/A
Air Construction Permits	2014	N/A	C	N/A

Where C = complete and N/A is not applicable.

**All of these projects shall be completed no later than December 31, 2015.**

**4.0 COMPLIANCE REPORTING**

TEC has satisfied the requirements of the consent decree. Quarterly reporting is no longer required upon closure of the consent decree.