



TAMPA ELECTRIC

September 1, 2004

Mr. Jeffery F. Koerner, P.E.  
New Source Review Section  
Florida Department of Environmental Protection  
111 South Magnolia Avenue, Suite 4  
Tallahassee, Florida 32301

RECEIVED

SEP 02 2004

BUREAU OF AIR REGULATION

Via FedEx  
Airbill No. 7902 5949 1651

**Re: H.L. Culbreath Bayside Power Station  
Request for Additional Information  
Project No. 0570040-022-AV  
Revision of Title V Permit No. 0570040-017-AV (as amended)  
Addition of Bayside Units 1 and 2**

Dear Mr. Koerner:

Tampa Electric Company (TEC) has received your letter dated June 4, 2004 (received by TEC on June 7, 2004), requesting additional information with regards to the application to revise the current Title V air operation permit to include new Units 1 and 2 of H.L. Culbreath Bayside Power Station (Bayside). This correspondence is intended to provide a response to each specific issue raised by the Department and the Environmental Protection Commission of Hillsborough County (EPCHC). The Responsible Official Certification and the Professional Engineer Certification are provided in Attachment A. For your convenience, TEC has restated each point and provided a response below each specific issue.

FDEP Item 1

Page 8, Facility Regulatory Classifications: TECO does not identify this facility as a "major source of hazardous air pollutants". However, the current Title V permit includes the following statement, "Based on the Title V permit revision application received on April 15, 2002, this facility is a major source of hazardous air pollutants (HAPs)." With the recent shutdown of the coal-fired boilers, is TECO requesting this change be made to the Title V permit?

**TEC Response**

**TEC currently has four permit applications on file with FDEP for Bayside: simple cycle operation and limited oil firing for Bayside Unit 3; minor modifications to Permit PSD-FL-301A; Title V renewal; and this current Title V revision to add Bayside Units 1 and 2. TEC has staggered the permit applications to allow each one to be handled separately although they are closely related. The application for the revision of the Title V permit No. 0570040-017-AV (as amended via Project No. 0570040-022-AV), requests to roll-in Bayside Units 1 and 2 into the existing Gannon Title V permit. TEC is not requesting any other changes with this application. On July 1, 2004, TEC submitted the Title V permit Renewal application to FDEP where changes to the existing permit have been requested; the removal of several emission units are among these requests. In the H.L. Culbreath Bayside Title V Permit Renewal application, TEC identified the facility as a major source of air pollutants other than hazardous air pollutants (HAPs). Please reference any further questions concerning the status of major source of HAPs to the H.L. Culbreath Bayside Title V Permit Renewal application project.**

**FDEP Item 2**

**Shutdown of Gannon Units: Previously, TECO notified the Department of the actual shutdown dates for each Gannon Unit 1 – 6 as well as the shutdown date for purposes of the acid rain program. Because these units are permanently shutdown as required by Permit No. PSD-FL-301A, the Department intends to remove these units from the Title V permit. Please comment. Describe the impacts of these shutdowns with regard to the existing Acid Rain part (Section IV) of the current Title V Permit No. 0570040-017-AV (as amended).**

**TEC Response**

**As stated in response to FDEP Item 1 above, TEC has already requested these units be removed from the existing Title V permit with the Title V Renewal application submitted on July 1, 2004. Please reference any further Gannon shutdown questions to the H.L. Culbreath Bayside Title V Permit Renewal application project.**

**FDEP Item 3**

**Coal Handling and Storage Equipment: Identify any of these existing emissions units that have been removed from site and/or permanently shutdown (rendered incapable of operation). The Department also intends to remove these units from the Title V permit. Please comment. In addition, describe TECO's plans for any of the existing coal handling and storage equipment.**

Mr. Jeffery F. Koerner, P.E.

September 1, 2004

Page 3 of 5

### **TEC Response**

**As stated in response to FDEP Item 1 above, TEC has addressed the removal of certain emission units from the existing Title V permit with the Title V Renewal application submitted on July 1, 2004. Please reference any further coal handling and storage equipment questions to the H.L. Culbreath Bayside Title V Permit Renewal application project.**

### **FDEP Item 4**

**CAM Plan: Please provide a Compliance Assurance Monitoring Plan for the SCR system used to reduce NO<sub>x</sub> emissions from Bayside Units 1 and 2.**

### **TEC Response**

**The discussion of CAM Plan applicability for Bayside Units 1 and 2 SCR system is addressed in the Title V permit Renewal application. Please reference any further questions to the H.L. Culbreath Bayside Title V Permit Renewal application submitted on July 1, 2004.**

### **FDEP Item 5**

**Compliance Status: The application (Attachment 7) includes a certification that all emissions units are in compliance with all existing requirements and permit conditions. The Department's database indicates a "minor non-compliance" issue for Bayside Unit 1A dated February of this year. Please describe the compliance issue and whether or not the unit is back in compliance. Units that are out of compliance require a compliance plan.**

### **TEC Response**

**TEC described to EPCHC that on February 28, 2004, the Steam Turbine (ST) was removed from service to change the generator brushes as part of routine maintenance on the ST. Unit 1A was used to start-up the ST that same day. However, on February 29, 2004, the ST tripped while in the process of starting up and needed to be brought back up. The ST tripped due to low header pressure caused by the governor valves going full open (100%). The governor valves regulate how much steam goes through the ST. Unit 1A was used to bring the steam turbine back up and the load was decreased to 10 MW. It took five hours for the steam turbine to be brought back on-line. TEC experienced excess emissions of NO<sub>x</sub> and CO for 5 hours, but was able to exclude four hours for startup, in accordance with permit Condition 17.c.(1) of PSD-FL-301A. After averaging one hour of excess emissions into the 24-hour average on February 29, 2004, Unit 1A was out of compliance; TEC experienced an exceedance of both NO<sub>x</sub> and CO on Unit 1A. As a result of this event, TEC has changed the logic in the digital control system (DCS) and the list of permissives on**

**the DCS has been changed to include a permissive for "Governor Valves Full Open." In addition, TEC has requested a ST warm startup provision that will help minimize emissions when the ST trips off-line and needs to be brought back up. The unit was immediately brought back into compliance.**

FDEP Item 6

Semiannual CEMS Report: Please submit a copy of the "Semiannual CEMS Report" for the second period of 2003, which is required by Condition 25 (Section IIIA) of Permit No. PSD-FL-301A.

TEC Response

**On July 19, 2004, TEC submitted a copy of Bayside's last two semi-annual reports for Bayside Units 1 and 2 that summarize data exclusion due to malfunctions. These reports were submitted for Quarter II, 2003 and Quarters III & IV, 2003 for Bayside Unit 1 and Bayside Units 1 & 2 respectively. Although these were requested as additional information for the *Minor Modification to the PSD Permit*, this report is the Semiannual CEMS Report. An additional copy for the second period of 2003 (Quarters III & IV) has been attached for your reference. Please see Attachment C.**

FDEP Item 7

Timing of Permit Projects: TECO currently has open applications for the following projects: simple cycle operation and limited oil firing for Bayside Unit 3; minor modifications to Permit PSD-FL-301A; and this current Title V revision to add Bayside Units 1 and 2. In addition, the deadline for submitting the Title V renewal application is July 5, 2004. If TECO submits a timely and complete Title V renewal application, it may be possible to time these projects such that the modifications to the PSD permit are completed first and then a single Title V renewal permit follows which incorporates these changes as well as the addition of Bayside Units 1 and 2 and the shutdown of the existing Gannon Units. Provide TECO's preferred schedule for these permit projects.

TEC Response

**TEC agrees with the Department and prefers to have the modifications to the PSD permit completed first, and then have a single Title V renewal permit that follows and incorporates the modified PSD permit conditions, as well as the addition of Bayside Units 1 and 2, and the shutdown of the existing Gannon units. However, TEC would prefer to leave the simple cycle operation and limited oil firing for Bayside Unit 3 separate to avoid having this permit application hold up the issuance of the Title V permit.**

Mr. Jeffery F. Koerner, P.E.

September 1, 2004

Page 5 of 5

EPCHC Items

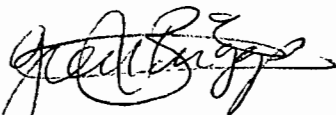
- i. EU-020 to 026-7 – No emission factor is given for NO<sub>x</sub> in Section 6 and no calculation of emissions is shown in Section 8.
- ii. For CO (-9), PM (-11), PM<sub>10</sub> (-13), SO<sub>2</sub> (-15), SAM (-17), and VOC (-19), why is the emission factor given in Section 6 the same as the potential emissions in lb/hour given in Section 3 on EU-020 to 026? Emission factors are used to determine potential emissions, but normally don't have the same units as them.
- iii. There are no calculations of emissions shown in Section 8 for CO (-9), PM (-11), PM<sub>10</sub> (-13), SAM (-17), and VOC (-19) on EU-020 to 026.
- iv. For PM(-11), PM<sub>10</sub> (-13), SO<sub>2</sub> (-15), and VOC (-19) on EU-020 to 026, why is the hourly rate used to calculate annual potential emissions in Section 8 lower than the potential lb/hour rate given in Section 3?

TEC Response

**TEC has revised the pages of the application that relate to the potential emissions and calculations in Subsection F1 (Emissions Unit Pollutant Detail Information) for each emissions unit. There are no emission factors. The potential emission rates are all based upon General Electric (GE) Vendor data. Please see Attachment B.**

TEC appreciates your consideration in this matter and if you have any questions, please call me at (813) 228-4302.

Sincerely,



Greer Briggs  
Environmental Engineer  
Environmental, Health & Safety

EHS\bmr\GMB203

c/att: Mr. Jerry Kissel, FDEP-SWD  
Mr. Jerry Campbell, EPCHC  
Mr. Jim Little, EPA Region 4  
Mr. John Bunyak, NPS

**Attachment A**  
**Responsible Official Certification**  
**Professional Engineer Certification**

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Wade A. Maye  
Signature

8/30/04  
Date

Wade A. Maye  
Name

General Manager, Bayside Power Station  
Title

**TAMPA ELECTRIC COMPANY  
H.L. CULBREATH BAYSIDE POWER STATION  
REVISION OF TITLE V PERMIT NO. 0570040-017-AV  
ADDITION OF UNITS 1 AND 2**

**Professional Engineer Certification**

Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

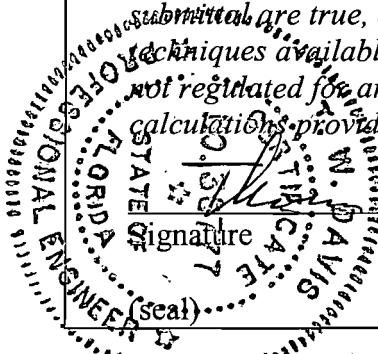
*(1) To the best of my knowledge, the information presented in the Tampa Electric Company (TEC) response to the Department's Request for Additional Information (RAI) dated June 4, 2004 concerning revisions to Title V Permit No. 0570040-017-AV, Addition of Units 1 and 2 are true, accurate, and complete based on my review of material provided by TEC engineering and environmental staff; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this submission are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of air pollutants not regulated for an emissions unit, based solely upon the materials, information and calculations provided with this certification.*

Signature

Date

*8/24/04*



\* Certification is applicable to the Tampa Electric Company (TEC) response to the Department's Request for Additional Information (RAI) dated June 4, 2004 concerning revisions to Title V Permit No. 0570040-017-AV, addition of Units 1 and 2.



**Attachment B**  
**Revised Potential Emissions and Calculation pages**

**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: <b>NOX</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>23.1 lb/hour                      101.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.</b>  <b>Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 101.2 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>CO</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>28.7 lb/hour                      125.7 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>PM</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>			

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: <b>PM10</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>20.5 lb/hour</b> <b>88.9 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>			

EMISSIONS UNIT INFORMATION  
Section [ 1 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 9 ] of [ 14 ]

**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: <b>SO2</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>11.1 lb/hour                      45.1 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 11.1 lb/hr</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 10.3 lb/hr</b> <b>Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 45.1 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>SAM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>2.0 lb/hour</b> <b>8.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
<p>8. Calculation of Emissions:</p> <p><b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO<sub>3</sub> (CT), 4% conversion of SO<sub>2</sub> to SO<sub>3</sub> (SCR), and 100% conversion of SO<sub>3</sub> to H<sub>2</sub>SO<sub>4</sub>.</b></p> <p><b>Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)] + [(11.1 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 2.0 lb/hr</b></p> <p><b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b></p> <p><b>Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)] + [(10.3 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 1.9 lb/hr</b>  <b>Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b>  <b>Annual Emissions = 8.3 ton/yr</b></p>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>VOC</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>3.0 lb/hour                      12.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	



**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: <b>NOX</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>23.1 lb/hour                      101.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.</b>  <b>Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 101.2 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>CO</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>28.7 lb/hour                      125.7 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>PM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>	

**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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	

**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: <b>SO2</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>11.1 lb/hour                      45.1 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 11.1 lb/hr</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 10.3 lb/hr</b> <b>Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 45.1 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>SAM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>2.0 lb/hour</b> <b>8.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
<p>8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO<sub>3</sub> (CT), 4% conversion of SO<sub>2</sub> to SO<sub>3</sub> (SCR), and 100% conversion of SO<sub>3</sub> to H<sub>2</sub>SO<sub>4</sub>.</b></p> <p><b>Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)]  + [(11.1 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 2.0 lb/hr</b></p> <p><b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b></p> <p><b>Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)]  + [(10.3 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 1.9 lb/hr</b>  <b>Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b>  <b>Annual Emissions = 8.3 ton/yr</b></p>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION  
Section [ 2 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 13 ] of [ 14 ]

**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: <b>VOC</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>3.0 lb/hour                      12.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: NOX		2. Total Percent Efficiency of Control: N/A	
3. Potential Emissions: 23.1 lb/hour      101.2 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                    tons/year			
6. Emission Factor: N/A Potential emissions calculated using permit allowable rates. Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 101.2 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			



EMISSIONS UNIT INFORMATION  
Section [ 3 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 3 ] of [ 14 ]

**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: <b>CO</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>28.7 lb/hour                      125.7 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>PM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>	

EMISSIONS UNIT INFORMATION  
Section [ 3 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 7 ] of [ 14 ]

**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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	

EMISSIONS UNIT INFORMATION  
Section [ 3 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 9 ] of [ 14 ]

**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: <b>SO2</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>11.1 lb/hour                      45.1 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 11.1 lb/hr</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 10.3 lb/hr</b> <b>Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 45.1 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: SAM		2. Total Percent Efficiency of Control: N/A	
3. Potential Emissions: 2.0 lb/hour                      8.3 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:		7. Emissions Method Code: 2	
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO <sub>3</sub> (CT), 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and 100% conversion of SO <sub>3</sub> to H <sub>2</sub> SO <sub>4</sub> .  Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 2.0 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 1.9 lb/hr Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 8.3 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [ 3 ] of [ 7 ]

Page [ 13 ] of [ 14 ]

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: <b>VOC</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>3.0 lb/hour</b> <b>12.3 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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: <b>NOX</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>23.1 lb/hour                      101.2 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.</b>  <b>Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 101.2 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATION  
Section [ 4 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 3 ] of [ 14 ]

**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: <b>CO</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>28.7 lb/hour                      125.7 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	



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: <b>PM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>	

EMISSIONS UNIT INFORMATION  
Section [ 4 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 7 ] of [ 14 ]

**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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 88.9 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	

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: SO <sub>2</sub>		2. Total Percent Efficiency of Control: N/A	
3. Potential Emissions: 11.1 lb/hour                      45.1 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:		7. Emissions Method Code: 2	
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 45.1 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [ 4 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION

Page [ 11 ] of [ 14 ]

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: SAM	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 2.0 lb/hour                      8.3 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): - to - tons/year	
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:	7. Emissions Method Code: 2
<p>8. Calculation of Emissions:</p> <p>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO<sub>3</sub> (CT), 4% conversion of SO<sub>2</sub> to SO<sub>3</sub> (SCR), and 100% conversion of SO<sub>3</sub> to H<sub>2</sub>SO<sub>4</sub>.</p> <p>Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)] + [(11.1 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 2.0 lb/hr</p> <p>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</p> <p>Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S)] + [(10.3 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 1.9 lb/hr Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 8.3 ton/yr</p>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>VOC</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>3.0 lb/hour                      12.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions:  Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 12.3 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>NOX</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>23.1 lb/hour                      101.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.</b>  <b>Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 101.2 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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: <b>CO</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>28.7 lb/hour</b> <b>125.7 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>PM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>	



EMISSIONS UNIT INFORMATION  
Section [ 5 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 7 ] of [ 14 ]

**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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	

**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: SO2	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 11.1 lb/hour                      45.1 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 45.1 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>SAM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>2.0 lb/hour</b> <b>8.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
<p>8. Calculation of Emissions:</p> <p><b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO<sub>3</sub> (CT), 4% conversion of SO<sub>2</sub> to SO<sub>3</sub> (SCR), and 100% conversion of SO<sub>3</sub> to H<sub>2</sub>SO<sub>4</sub>.</b></p> <p><b>Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S) + [(11.1 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 2.0 lb/hr</b></p> <p><b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b></p> <p><b>Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 32 lb S) + [(10.3 lb SO<sub>2</sub> / hr) x (4 / 100) x (98 lb H<sub>2</sub>SO<sub>4</sub> / 64 lb SO<sub>2</sub>)] = 1.9 lb/hr</b>  <b>Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b>  <b>Annual Emissions = 8.3 ton/yr</b></p>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**EMISSIONS UNIT INFORMATION**

Section [ 5 ] of [ 7 ]

**POLLUTANT DETAIL INFORMATION**

Page [ 13 ] of [ 14 ]

**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: <b>VOC</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>3.0 lb/hour</b> <b>12.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

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: NOX		2. Total Percent Efficiency of Control: N/A	
3. Potential Emissions: 23.1 lb/hour      101.2 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to      tons/year			
6. Emission Factor: N/A Potential emissions calculated using permit allowable rates. Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.  Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 101.2 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION  
Section [ 6 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 3 ] of [ 14 ]

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: CO	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 28.7 lb/hour                      125.7 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: N/A Potential emissions calculated using permit allowable rates. Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions:  Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.  Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 125.7 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>PM</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>	

**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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	



EMISSIONS UNIT INFORMATION  
Section [ 6 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 9 ] of [ 14 ]

**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: <b>SO2</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>11.1 lb/hour                      45.1 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 11.1 lb/hr</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10<sup>6</sup> ft<sup>3</sup>/hr) x (1 lb S / 7,000 gr S) x (2 lb SO<sub>2</sub> / lb S) = 10.3 lb/hr</b> <b>Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 45.1 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

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: SAM	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 2.0 lb/hour                      8.3 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO <sub>3</sub> (CT), 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and 100% conversion of SO <sub>3</sub> to H <sub>2</sub> SO <sub>4</sub> .  Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 2.0 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 1.9 lb/hr Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 8.3 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**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: <b>VOC</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>3.0 lb/hour                      12.3 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION  
Section [ 7 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
Page [ 1 ] of [ 14 ]

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: <b>NOX</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>23.1 lb/hour                      101.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.c.</b>  <b>Annual Emissions = 23.1 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 101.2 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>CO</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>28.7 lb/hour                      125.7 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using permit allowable rates.</b> Reference:		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is allowable rate pursuant to Air Permit No. PSD-FL-301A, Section III, Condition 14.b.</b>  <b>Annual Emissions = 28.7 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 125.7 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**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: <b>PM</b>		2. Total Percent Efficiency of Control: <b>N/A</b>	
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:		7. Emissions Method Code: <b>2</b>	
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>			

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: <b>PM10</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>20.5 lb/hour                      88.9 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions: <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (20.3 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 20.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 88.9 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>PM emissions represent filterable and condensable particulate matter as measured by EPA Reference Methods 201 and 202.</b>  <b>PM and PM10 emission rates are assumed to be equal.</b>	

EMISSIONS UNIT INFORMATION

Section [ 7 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION

Page [ 9 ] of [ 14 ]

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: SO2	2. Total Percent Efficiency of Control: N/A
3. Potential Emissions: 11.1 lb/hour                      45.1 tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): -                      to                      tons/year	
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.  Hourly Emissions = (2.0 gr S / 100 scf) x (1.934 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 11.1 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = (2.0 gr S / 100 scf) x (1.806 x 10 <sup>6</sup> ft <sup>3</sup> /hr) x (1 lb S / 7,000 gr S) x (2 lb SO <sub>2</sub> / lb S) = 10.3 lb/hr Annual Emissions = 10.3 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 45.1 ton/yr	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	



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: SAM		2. Total Percent Efficiency of Control: N/A	
3. Potential Emissions: 2.0 lb/hour                      8.3 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: N/A Potential emissions calculated using GE vendor emission data. Reference:		7. Emissions Method Code: 2	
8. Calculation of Emissions: Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature based on 8% conversion of fuel sulfur to SO <sub>3</sub> (CT), 4% conversion of SO <sub>2</sub> to SO <sub>3</sub> (SCR), and 100% conversion of SO <sub>3</sub> to H <sub>2</sub> SO <sub>4</sub> .  Hourly Emissions = [(5.55 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(11.1 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 2.0 lb/hr  Annual emissions (Field 3) based on combustion turbine vendor hourly data for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).  Annual Emissions = [(5.15 lb S / hr) x (8 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 32 lb S)] + [(10.3 lb SO <sub>2</sub> / hr) x (4 / 100) x (98 lb H <sub>2</sub> SO <sub>4</sub> / 64 lb SO <sub>2</sub> )] = 1.9 lb/hr Annual Emissions = 1.9 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb) Annual Emissions = 8.3 ton/yr			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION  
 Section [ 7 ] of [ 7 ]

POLLUTANT DETAIL INFORMATION  
 Page [ 13 ] of [ 14 ]

**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: <b>VOC</b>	2. Total Percent Efficiency of Control: <b>N/A</b>
3. Potential Emissions: <b>3.0 lb/hour                      12.3 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>N/A</b> <b>Potential emissions calculated using GE vendor emission data.</b> Reference:	7. Emissions Method Code: <b>2</b>
8. Calculation of Emissions:  <b>Hourly emission rate (Field 3) is combustion turbine vendor data for 100 % load and 18°F ambient temperature.</b>  <b>Annual emissions (Field 3) based on combustion turbine vendor hourly data (2.8 lb/hr) for 100 % load and 59°F ambient temperature (conservative estimate since average annual temperature for Tampa is 72°F).</b>  <b>Annual Emissions = 2.8 lb/hr x 8,760 hr/yr x (1 ton / 2,000 lb)</b> <b>Annual Emissions = 12.3 ton/yr</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**Attachment C**  
**BPS Semiannual CEMS Report**  
**Quarters III & IV, 2003**



TAMPA ELECTRIC

January 30, 2004

Ms. Deborah Getzoff  
Southwest District  
Florida Department of Environmental Protection  
3804 Coconut Palm Drive  
Tampa, Florida 33619

Via FedEx  
Airbill No. 7905 3402 9178

Mr. Jerry Campbell  
The Environmental Protection Commission  
of Hillsborough County  
1410 North 21<sup>st</sup> Street  
Tampa, Florida 33605

Via FedEx  
Airbill No. 7925 6039 9194

**Re: Tampa Electric Company  
Quarter III & IV, 2003  
Bayside Semi-Annual Excess Emissions & Subpart GG Report  
Air Construction Permit #0570040-015-AC  
Air Permit Number: PSD-FL-301A  
AIRS #0570040, E.U. ID#020, 021, 022**

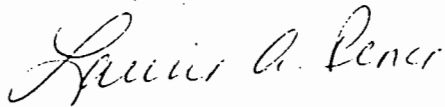
Dear Ms. Getzoff and Mr. Campbell:

As required by Section III, Specific Condition 25 and Section IV Appendix XS of the above referenced permit, TEC shall submit a semi-annual report to the Department of Environmental Protection and the Environmental Protection Commission of Hillsborough County, by January 30<sup>th</sup> of each year for Quarters 3 and 4, for each gas turbine summarizing the CEMS data and equipment. The report shall include: the monthly sulfur content (Attachment 1), the NO<sub>x</sub> Excess Emissions Report, the 24-hour block average for each day of operation; the number of 1-hour emission averages excluded from each 24-hour average; the emissions due to monitor downtime; the reason for any monitor downtime; unusual maintenance or repair of the CEMS; a summary of any RATA tests performed, an updated general range of ammonia flow rates required to meet NO<sub>x</sub> emissions limitations over the range of gas turbine load conditions (Attachments 2-4) and the Data Assessment Report (DAR) (Attachment 5) as required by Specific Condition 23.e.

Ms. Deborah Getzoff  
Mr. Jerry Campbell  
January 30, 2004  
Page 2 of 2

If there are any questions regarding this report, please contact Laurie Pence or me at (813) 641-5060.

Sincerely,



*or*  
Laura R. Crouch  
Manager – Air Programs  
Environmental, Health & Safety

EA/br/RPT001BPS Exc. Emis./GG Report Qtr 3/4, 03

Enclosures

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Wade A. Maye 1/28/04  
Signature Date

Wade A. Maye General Manager, Bayside Power Station  
Name Title

# **Attachment 1**

BAYSIDE POWER STATION  
MONTHLY SULFUR CONTENT REPORT

Date	Sulfur Content (grains per 100 SCF)
July-03	0.0954
August-03	0.0922
September-03	0.0508



BAYSIDE POWER STATION  
MONTHLY SULFUR CONTENT REPORT

Date	Sulfur Content (grains per 100 SCF)
October-03	0.0416
November-03	0.0592
December-03	0.0531

Note: 10/30/03-11/12/03 vendor analyzer out

# **Attachment 2**

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 07/01/03 to 12/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer  
and Model No.:

Thermal Environmental 42CLS

Process Unit  
Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 1A)

Date of Latest CMS  
Certification or Audit

October 2003

Total source operating  
time in reporting period<sup>1</sup>:

3331.5

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/Shutdown <u>223</u>	a. Monitor equipment malfunctions <u>0</u>
b. Control equipment problems <u>0</u>	b. Non-Monitor equipment malfunctions <u>0</u>
c. Process problems <u>4</u>	c. Quality assurance calibration <u>36</u>
d. Other known causes <u>20</u>	d. Other known causes <u>10</u>
e. Unknown causes <u>0</u>	e. Unknown causes <u>0</u>
2. Total duration of excess emission <u>247</u>	2. Total CMS Downtime <u>46</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time <u>7.0 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time <u>1.0 %</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

**BAYSIDE POWER STATION - CT 1A  
24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003**

<b>Date</b>	<b>24-hour block CO</b>	<b>24-hour block NOx</b>
07/01/2003	0.7	3.0
07/02/2003	0.3	3.0
07/03/2003	0.3	3.0
07/04/2003	0.4	3.0
07/05/2003	0.3	3.0
07/06/2003	0.3	3.0
07/07/2003	0.4	3.0
07/08/2003	0.6	3.1
07/09/2003	0.6	3.5
07/10/2003	0.8	3.1
07/11/2003	0.5	2.9
07/12/2003	0.7	3.0
07/13/2003	0.6	3.0
07/14/2003	0.7	3.0
07/15/2003	0.7	3.0
07/16/2003	0.7	3.0
07/17/2003	0.8	3.0
07/18/2003	0.7	3.0
07/19/2003	0.8	3.0
07/20/2003	0.8	3.0
07/21/2003	0.9	3.0
07/22/2003	0.8	3.0
07/23/2003	0.8	3.0
07/24/2003	0.9	3.0
07/25/2003	1.0	3.0
07/26/2003	1.0	3.0
07/27/2003	1.1	3.0
07/28/2003	4.3	3.2
07/29/2003	1.2	3.3
07/30/2003	3.0	1.1
07/31/2003	1.3	3.2
08/01/2003	0.7	3.1
08/02/2003	0.7	3.0
08/03/2003	0.8	3.0
08/04/2003	0.8	3.1
08/05/2003	0.8	3.0
08/06/2003	0.9	3.1
08/07/2003	0.8	2.9
08/08/2003	0.7	2.9
08/09/2003	0.8	3.0
08/10/2003	0.8	3.0
08/11/2003	0.9	3.1
08/12/2003	1.0	3.0
08/13/2003	1.1	2.7
08/14/2003	0.9	3.1
08/15/2003	1.1	3.0
08/16/2003	1.2	2.9
08/17/2003	1.3	2.9
08/18/2003	0.7	2.5

08/19/2003	0.4	2.9
08/20/2003	0.4	2.9
08/21/2003	0.4	2.9
08/22/2003	0.4	2.9
08/23/2003	0.5	2.9
08/24/2003	0.6	3.0
08/25/2003	0.6	2.9
08/26/2003	0.8	3.0
08/27/2003	0.7	2.9
08/28/2003	0.7	2.9
08/29/2003	0.8	2.7
08/30/2003	0.7	2.9
08/31/2003	0.8	2.9
09/01/2003	1.4	3.4
09/02/2003	0.8	2.9
09/03/2003	0.9	3.0
09/04/2003	1.0	2.9
09/05/2003	0.9	2.9
09/06/2003	0.9	2.9
09/07/2003	1.1	2.9
09/08/2003	1.2	2.8
09/09/2003	1.1	2.9
09/10/2003	0.9	2.9
09/11/2003	1.0	2.9
09/12/2003	1.0	2.9
09/13/2003	1.1	2.4
09/14/2003	1.1	2.9
09/15/2003	1.1	2.9
09/16/2003	0.6	2.9
09/17/2003	0.4	2.9
09/18/2003	0.5	2.9
09/19/2003	0.6	2.9
09/20/2003	0.5	2.9
09/21/2003	0.5	2.9
09/22/2003	0.6	2.9
09/23/2003	0.7	3.0
09/24/2003	0.7	2.9
09/25/2003	0.7	2.9
09/26/2003	0.7	2.9
09/27/2003	0.7	2.9
09/28/2003	0.7	2.9
09/29/2003	0.7	2.9
09/30/2003	0.8	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1A  
EXCLUDED DATA - QUARTER 3, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
07/01/2003	2200	5.9	20.6	Shutdown
07/02/2003	0900	47.8	197.6	Start-up
07/08/2003	2300	10.2	86.4	Shutdown
07/09/2003	0900	27.6	155.8	Start-up
07/11/2003	0100	28.0	1241.0	Invalid Hour
	0900	39.7	975.3	Start-up
	1000	52.1	877.1	Start-up
	1100	22.2	157.9	Malfunction
	1700	9.6	278.6	Shutdown
07/12/2003	0100	39.7	205.0	Shutdown
07/14/2003	0300	44.9	649.4	Shutdown
	0600	46.1	368.4	Start-up
	0700	18.0	41.9	Start-up
07/15/2003	2300	40.3	604.0	Shutdown
07/16/2003	0700	28.3	118.0	Start-up
07/17/2003	1900	24.0	327.6	Shutdown
07/18/2003	1200	46.6	300.9	Start-up
	1300	14.7	3.9	Start-up
	1900	31.9	179.5	Shutdown
07/19/2003	1000	21.1	359.1	Start-up
	1100	35.9	266.6	Start-up
	2200	6.2	38.2	Shutdown
	2300	2.7	2756.9	Shutdown
07/20/2003	1300	38.6	430.8	Start-up
	1400	15.4	12.7	Start-up
07/22/2003	2200	6.2	35.3	Shutdown
	2300	4.4	2480.5	Shutdown
07/23/2003	0800	7.1	525.5	Start-up
	0900	24.3	150.2	Start-up
07/24/2003	2300	8.2	175.4	Shutdown
07/25/2003	0700	38.4	362.9	Start-up
	0800	20.0	55.1	Start-up
07/26/2003	2100	11.0	232.1	Shutdown
07/27/2003	0900	35.0	380.1	Start-up
	1000	10.2	24.8	Start-up
07/29/2003	0800	25.1	111.8	Start-up
07/30/2003	2400	41.9	741.2	Shutdown
07/31/2003	0800	25.6	185.7	Start-up
	2300	11.9	226.7	Shutdown
08/01/2003	0900	24.4	429.1	Start-up
	1000	22.3	95.4	Start-up
08/04/2003	2400	11.2	358.1	Shutdown
08/05/2003	0800	24.1	148.8	Start-up
	2400	6.7	72.1	Shutdown
08/06/2003	0700	15.2	94.7	Start-up
	2300	8.5	106.7	Shutdown
08/07/2003	0800	35.1	242.2	Start-up
08/10/2003	2400	15.8	605.5	Shutdown
08/11/2003	0600	34.5	132.3	Start-up
	2300	20.2	322.2	Shutdown
08/12/2003	0700	48.5	336.4	Start-up
	2400	25	353	Shutdown
08/13/2003	0700	67.6	189.6	Start-up
	0800	5.2	*	Start-up
	2300	11.3	452.8	Shutdown
08/14/2003	0800	20.3	153.9	Start-up
	2300	6.7	51.7	Shutdown
	2400	8.4	2531.7	Shutdown
08/15/2003	0700	22.7	161.2	Start-up
08/19/2003	2200	12	162.6	Shutdown
08/20/2003	0800	38.8	438.5	Start-up

	0900	9.3	5.8	Start-up
	2400	6.8	215.1	Shutdown
08/21/2003	1300	25.3	175.5	Start-up
08/22/2003	1900	5.5	20.7	Shutdown
	2000	20.7	1431.6	Shutdown
08/23/2003	1000	*	88	Start-up
	1100	28.8	138.2	Start-up
	2300	15.6	400.2	Shutdown
08/24/2003	1000	33.7	259.7	Start-up
08/27/2003	0100	27.3	1157.9	Shutdown
	0900	20.1	157.9	Start-up
08/28/2003	2200	35.5	721.1	Shutdown
08/29/2003	0700	40.6	334.3	Start-up
	0800	6.1	*	Start-up
	2300	10.6	405.3	Shutdown
08/30/2003	0900	33.2	215.2	Start-up
08/31/2003	2300	18.9	447.5	Shutdown
09/01/2003	0800	17.8	528.6	Start-up
	0900	22.2	108.1	Start-up
09/02/2003	0200	5.5	12.9	Shutdown
	0300	36.9	1403.3	Shutdown
	0700	29.1	80.4	Start-up
	2300	9.4	109.2	Shutdown
09/03/2003	0600	22.2	500.8	Start-up
	0700	13.2	42.9	Start-up
	2300	16.9	755.2	Shutdown
09/04/2003	0600	35.5	184	Start-up
	2100	6.1	32.3	Shutdown
	2200	2.7	2415.8	Shutdown
09/05/2003	0700	25.2	134.4	Start-up
09/08/2003	0100	6.1	54.7	Shutdown
	0600	14.7	69.3	Start-up
09/12/2003	1300	9	58.8	Malfunction
	1400	17.1	62.9	Malfunction
	2300	15.7	434.8	Shutdown
09/13/2003	0900	22.6	135.7	Start-up
09/14/2003	0000	7	269.6	Shutdown
	0800	8.9	516.3	Start-up
	0900	18.6	100.9	Start-up
09/17/2003	2300	6.3	46.9	Shutdown
09/18/2003	0000	*	2304.2	Shutdown
	0600	41.1	243.3	Start-up
09/19/2003	0100	9.1	131.6	Shutdown
	0700	17.9	335.3	Start-up
	0800	16.7	58.2	Start-up
	2000	7.1	66.1	Shutdown
09/20/2003	0700	15.2	446.1	Start-up
	0800	27.2	153.7	Start-up
09/21/2003	0100	15.4	324.9	Shutdown
	0800	22	112.8	Start-up
09/22/2003	0000	7.9	150.8	Shutdown
	0700	33.7	424.1	Start-up
	0800	14.5	54.7	Start-up
09/24/2003	2300	18.6	265.6	Shutdown
09/25/2003	0600	34.5	338.2	Start-up
	0700	12.4	33.5	Start-up
09/27/2003	0000	40.3	703.4	Shutdown
	0800	35.4	363.2	Start-up
	0900	16.5	49.7	Start-up
09/28/2003	0000	18	345.8	Shutdown
	0800	33.7	314	Start-up
	0900	15.3	42.5	Start-up
09/30/2003	0000	10.3	135.9	Shutdown
	0700	23.6	361.7	Start-up
	0800	16	49.8	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

BAYSIDE POWER STATION - CT 1A  
 MONITOR DOWNTIME - QUARTER 3, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
07/01/2003	1	Calibrate CO Monitor
08/18/2003	3	Aborted Linearity
09/10/2003	2	CO Monitor failed Calibration/ Re-calibration

Monitor availability:	99.67%
-----------------------	--------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



BAYSIDE POWER STATION - CT 1A  
MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

NOx: 40 CFR 75, Appendix B  
 CO: 40 CFR 60, Appendix F

RATA data required pursuant to these CFRs

**MONITORING DATA CHECKING SOFTWARE 4.1 BETA**  
 TEST SUMMARY REPORT PAGE 1

05/28/2003

ORIS Code: 7873 State: FL  
 Facility Name: BAYSIDE County: HILLSBOROUGH

Unit/ Stack	Sys Comp Test	Reported	Recalculated	Hour/ Test Load	Test Test	Test Test
ID	Comp/Sys Parm Type Type	End Date	Time #	Lvl	Reason	Result Result
CT1A	/113 NOX	RATA (RT 610-616)	04/23/2003 1519	1	1	C Pass-APS Pass-APS
MONITORING DATA CHECKING SOFTWARE 4.1 BETA						05/28/2003
RATA REPORT (RT 610/611)						PAGE 2

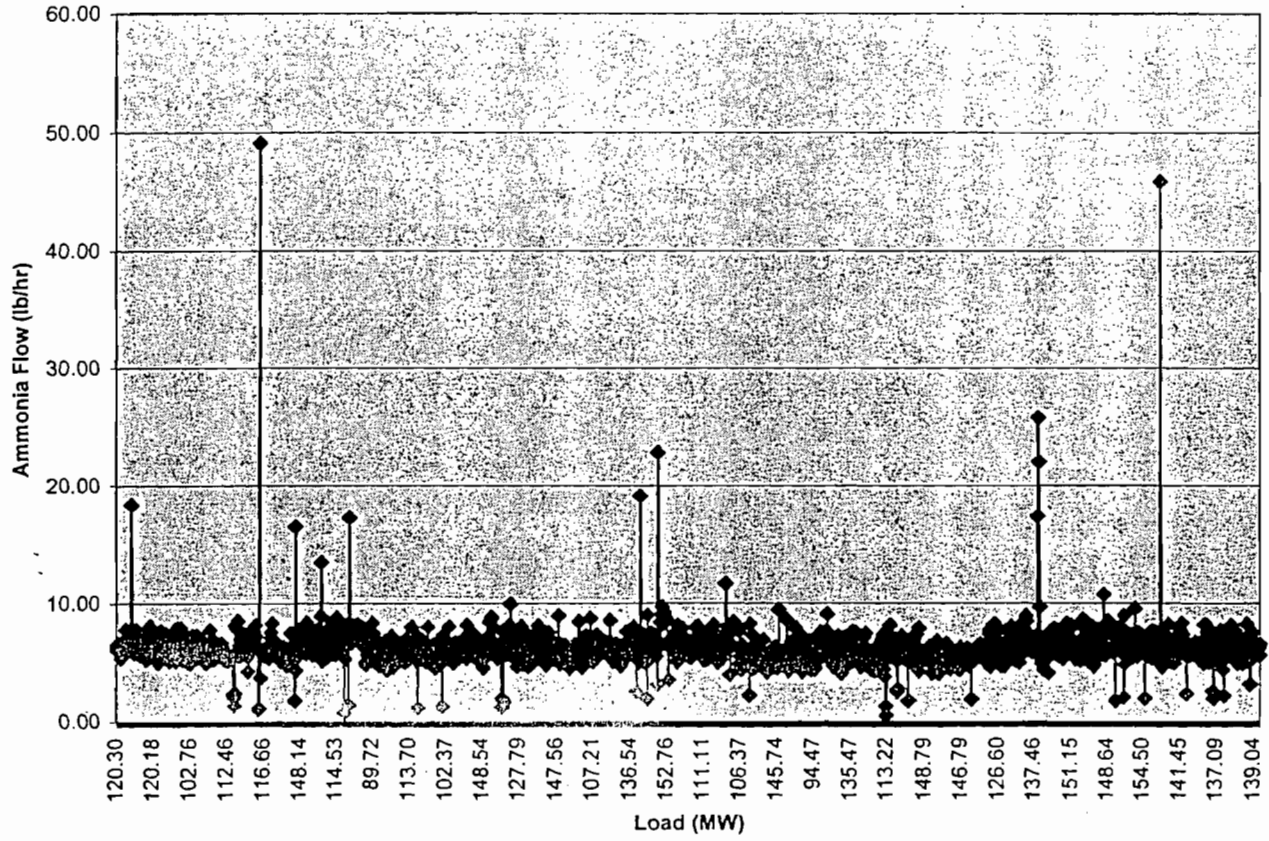
ORIS Code: 7873 Facility: BAYSIDE State: FL  
 Unit/Stack ID: CT1A System ID: 113 Parameter: NOX  
 Test End Date/Time: 04/23/2003 1519 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU  
 Reason for Test: C  
 Performance Spec: <= 10.0% Next RATA: Four Op Qtrs  
 Recalc. Results: Pass-APS % RA:12.77 Mean Diff: 0.001 BAF: 1.111  
 Reported Results: Pass-APS % RA:12.77 Mean Diff: 0.001 BAF: 1.111

Operating Level: H

Run	Start Date	Start Time	End Run	End Date	Reference Time	Status	Monitoring Method	Gross Load Value	or Velocity
1	04/23/2003	1023	04/23/2003	1044	1	0.012	0.011	162	
2	04/23/2003	1054	04/23/2003	1115	1	0.012	0.011	162	
3	04/23/2003	1128	04/23/2003	1149	1	0.012	0.011	161	
4	04/23/2003	1212	04/23/2003	1233	1	0.012	0.011	160	
5	04/23/2003	1247	04/23/2003	1308	1	0.013	0.011	160	
6	04/23/2003	1323	04/23/2003	1344	1	0.012	0.011	159	
7	04/23/2003	1355	04/23/2003	1416	1	0.012	0.011	158	
8	04/23/2003	1427	04/23/2003	1448	1	0.012	0.011	158	
9	04/23/2003	1458	04/23/2003	1519	1	0.013	0.011	157	

Summary Statistics	Reported	Recalculated
Mean of Monitoring System	0.011	0.011
Mean of Reference Method Values	0.012	0.012
Mean of Difference	0.001	0.001
Standard Deviation of Difference	0.000	0.000
Confidence Coefficient	0.000	0.000
T-Value	2.306	2.306
Relative Accuracy:	12.77	12.77
Bias Adjustment Factor	1.111	1.111
APS Flag	1	1
Indicator of Normal Op. Level	N	N
Gross Unit Load or Velocity	160	160
Reference Method Used	7e,3a	

Unit 1A Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 07/01/03 to 12/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer  
and Model No.:

Thermal Environmental 42CLS

Process Unit  
Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 1B)

Date of Latest CMS  
Certification or Audit

October 2003

Total source operating  
time in reporting period<sup>1</sup>:

3201.75

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/Shutdown <u>210</u>	a. Monitor equipment malfunctions <u>0</u>
b. Control equipment problems <u>0</u>	b. Non-Monitor equipment malfunctions <u>9</u>
c. Process problems <u>0</u>	c. Quality assurance calibration <u>0</u>
d. Other known causes <u>0</u>	d. Other known causes <u>0</u>
e. Unknown causes <u>0</u>	e. Unknown causes <u>0</u>
2. Total duration of excess emission <u>210</u>	2. Total CMS Downtime <u>9</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time <u>7 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time <u>0 %</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

BAYSIDE POWER STATION - CT 1B  
24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003

Date	24-hour block CO	24-hour block NOx
07/01/2003	1.1	3.2
07/02/2003	1.1	3.0
07/03/2003	1.3	3.1
07/04/2003	1.1	3.0
07/05/2003	1.1	3.0
07/06/2003	1.1	3.0
07/07/2003	1.0	3.2
07/08/2003	1.1	3.0
07/09/2003	1.2	3.1
07/10/2003	0.9	3.0
07/11/2003	0.9	3.0
07/12/2003	1.0	3.0
07/13/2003	0.9	3.0
07/14/2003	1.0	2.9
07/15/2003	0.9	3.0
07/16/2003	1.0	3.1
07/17/2003	1.2	3.3
07/18/2003	0.9	3.1
07/19/2003	Offline	Offline
07/20/2003	0.0	0.0
07/21/2003	1.0	3.0
07/22/2003	1.0	3.0
07/23/2003	1.0	3.0
07/24/2003	1.0	3.0
07/25/2003	1.0	3.0
07/26/2003	1.0	3.0
07/27/2003	1.0	3.0
07/28/2003	1.0	3.0
07/29/2003	1.1	3.5
07/30/2003	1.0	2.9
07/31/2003	1.0	3.0
08/01/2003	1.1	3.0
08/02/2003	1.0	3.0
08/03/2003	Offline	Offline
08/04/2003	1.3	3.3
08/05/2003	1.1	3.0
08/06/2003	1.1	3.0
08/07/2003	1.1	3.0
08/08/2003	1.1	2.9
08/09/2003	1.2	2.9
08/10/2003	1.1	3.0
08/11/2003	1.2	3.0
08/12/2003	1.2	3.0
08/13/2003	1.2	3.0
08/14/2003	1.2	3.0
08/15/2003	1.2	3.0
08/16/2003	1.2	2.9
08/17/2003	1.4	3.2
08/18/2003	1.3	2.9

08/19/2003	1.3	2.9
08/20/2003	1.3	3.1
08/21/2003	1.3	2.9
08/22/2003	Offline	Offline
08/23/2003	0.7	3.0
08/24/2003	0.6	3.0
08/25/2003	0.7	2.9
08/26/2003	0.9	2.7
08/27/2003	0.7	3.0
08/28/2003	0.7	3.0
08/29/2003	0.8	3.0
08/30/2003	0.7	2.9
08/31/2003	0.7	2.9
09/01/2003	0.7	2.9
09/02/2003	0.7	2.9
09/03/2003	0.8	2.9
09/04/2003	0.8	3.1
09/05/2003	Offline	Offline
09/06/2003	0.7	2.9
09/07/2003	0.8	3.3
09/08/2003	0.8	2.9
09/09/2003	0.9	2.9
09/10/2003	0.8	2.9
09/11/2003	0.9	3.0
09/12/2003	1.1	2.9
09/13/2003	1.0	2.9
09/14/2003	0.9	3.1
09/15/2003	1.0	2.9
09/16/2003	0.9	3.0
09/17/2003	1.0	2.9
09/18/2003	1.0	2.9
09/19/2003	1.0	2.9
09/20/2003	1.0	2.9
09/21/2003	1.0	3.0
09/22/2003	1.0	2.9
09/23/2003	1.0	3.0
09/24/2003	1.1	2.9
09/25/2003	1.1	2.9
09/26/2003	1.1	2.9
09/27/2003	1.7	3.0
09/28/2003	1.3	3.3
09/29/2003	1.1	2.9
09/30/2003	1.1	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1B  
EXCLUDED DATA - QUARTER 3, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
07/01/2003	2300	*	39.1	Shutdown
	2400	*	2358.8	Shutdown
07/02/2003	0600	24.4	237.9	Start-up
07/03/2003	2300	24.8	1211.7	Shutdown
07/04/2003	0900	31	166	Start-up
07/06/2003	2200	7.2	68.8	Shutdown
07/07/2003	0900	38.8	391.6	Start-up
	2200	16.8	216.5	Shutdown
07/08/2003	0700	21.5	234	Start-up
07/10/2003	0100	36.9	1211.5	Shutdown
	0700	24.3	175.7	Start-up
07/13/2003	0100	9.8	115.1	Shutdown
	1000	25.6	151.9	Start-up
07/14/2003	0200	*	263.8	Shutdown
	0600	12.2	74.4	Start-up
07/16/2003	2200	*	44.7	Shutdown
	2300	10.1	2337.6	Shutdown
07/17/2003	0800	20	636.8	Start-up/Shutdown
	1100	33.4	410.2	Start-up
	2200	6.7	83	Shutdown
07/18/2003	1200	31.3	332.2	Start-up
	1300	27.6	100.4	Start-up
	1800	6.6	155.1	Shutdown
07/20/2003	1900	29.1	520.7	Start-up/ Shutdown
07/21/2003	0800	51.5	261	Start-up
	0900	44.5	632.1	Start-up
	1000	18.2	109.1	Start-up
08/02/2003	2200	17.1	503.5	Shutdown
08/04/2003	0700	43.5	379.2	Start-up
08/16/2003	2200	6.9	170.1	Shutdown
08/17/2003	0900	39.5	470.9	Start-up
	1000	10	*	Start-up
	2300	*	70	Shutdown
08/18/2003	0800	36	297.4	Start-up
	2200	21.9	414.3	Shutdown
08/19/2003	0700	45.5	341.2	Start-up
08/20/2003	2300	*	34.8	Shutdown
	2400	*	2236.8	Shutdown
08/21/2003	0900	37.1	544.4	Start-up
	1000	12.4	36.4	Start-up
	1700	7.3	91.9	Shutdown
08/23/2003	1100	42.6	372.4	Start-up
	1200	28	115.7	Start-up
	2400	14.6	403.9	Shutdown
08/24/2003	0900	19.8	467.2	Start-up
	1000	19	74.3	Start-up
	2300	19.4	723.5	Shutdown
08/25/2003	0600	40.6	452.8	Start-up

	0700	13.8	29.5	Start-up
	2200	9.4	164.8	Shutdown
08/26/2003	0900	22.8	150.7	Start-up
	2400	10.7	151.6	Shutdown
08/27/2003	0900	12.8	490	Start-up
	1000	20.1	126.6	Start-up
09/04/2003	2100	*	224.2	Shutdown
09/06/2003	0900	32.5	464	Start-up
	1000	24.2	163.4	Start-up
09/07/2003	0200	*	71.2	Shutdown
	0900	18.6	140	Start-up
	2400	14.5	413.7	Shutdown
09/08/2003	0700	14.2	119.7	Start-up
09/09/2003	0100	6.5	73.4	Shutdown
	0700	15.6	239.4	Start-up
09/10/2003	2300	10.5	330.6	Shutdown
09/11/2003	0700	26.5	140.2	Start-up
09/12/2003	0100	41.9	1099.6	Shutdown
	0700	46.1	301.6	Start-up
	0800	50.4	312.1	Start-up
	0900	*	10.4	Start-up
09/13/2003	2300	*	67.9	Shutdown
09/14/2003	0700	*	617.8	Start-up
	0800	18.5	96.6	Start-up
	2400	24.7	427.1	Shutdown
09/15/2003	0400	8.6	454.8	Start-up
	0500	60	86.7	Start-up
	2400	14.4	657	Shutdown
09/16/2003	0600	25.6	173.3	Start-up
	2400	34.6	949.1	Shutdown
09/17/2003	0600	34	462.3	Start-up
	0700	13.7	57.1	Start-up
09/18/2003	2400	6.8	68.1	Shutdown
09/19/2003	0600	11.1	467.7	Start-up
	0700	14.2	62.1	Start-up
09/20/2003	2200	20	349.5	Shutdown
09/21/2003	0800	*	341.5	Start-up
	0900	20.5	101.6	Start-up
	2300	*	48	Shutdown
	2400	*	2310.3	Shutdown
09/22/2003	0700	19.8	191.5	Start-up
	2400	36.4	606	Shutdown
09/23/2003	0500	40.4	335.1	Start-up
	2300	25	426.3	Shutdown
09/24/2003	0600	36.3	246.6	Start-up
09/25/2003	2300	24.3	419.3	Shutdown
09/26/2003	0600	33.4	551.2	Start-up
	0700	20.6	48.5	Start-up
	2300	40	612.6	Shutdown
09/27/2003	0800	35.8	235.3	Start-up
	2400	35.1	1392.3	Shutdown
09/28/2003	0700	41.5	343.4	Start-up



	2300	18.5	445.3	Shutdown
09/29/2003	0600	24.9	192.8	Start-up
	2300	19.3	581.8	Shutdown
09/30/2003	0600	21.3	534.5	Start-up
	0700	14.3	64.1	Start-up
	2200	8.5	114.6	Shutdown

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

BAYSIDE POWER STATION - CT 1B  
MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1B  
 MONITOR DOWNTIME - QUARTER 3, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
08/23/2003	9	Calibration bottles valved out

Monitor availability:	97%
-----------------------	-----

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

NOx: 40 CFR 75, Appendix B  
 CO: 40 CFR 60, Appendix F  
 Date RATA data

RATA data required pursuant to these CFRs

MONITORING DATA CHECKING SOFTWARE 4.1 BETA  
 TEST SUMMARY REPORT PAGE 1

05/28/2003

ORIS Code: 7873 State: FL  
 Facility Name: BAYSIDE County: HILLSBOROUGH

Unit/ Reported Recalculated  
 Stack Sys Comp Test Hour/ Test Load Test Test  
 ID Comp/Sys Parm Type Type End Date Time # Lvl Reason Result Result

CT1B /213 NOX RATA (RT 610-616) 04/17/2003 1209 1 1 C Pass-APS Pass-APS  
 MONITORING DATA CHECKING SOFTWARE 4.1 BETA 05/28/2003  
 RATA REPORT (RT 610/611) PAGE 2

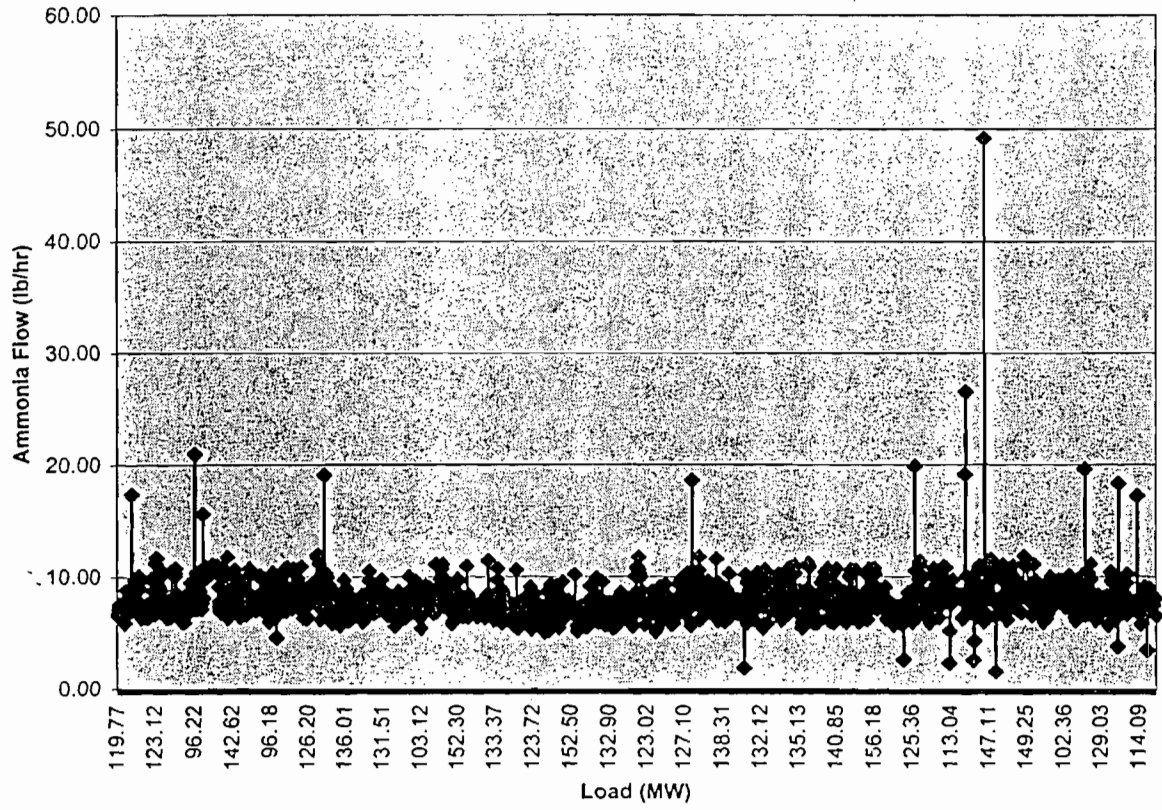
ORIS Code: 7873 Facility: BAYSIDE State: FL  
 Unit/Stack ID: CT1B System ID: 213 Parameter: NOX  
 Test End Date/Time: 04/17/2003 1209 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU  
 Reason for Test: C  
 Performance Spec: <= 10.0% Next RATA: Four Op Qtrs  
 Recalc. Results: Pass-APS % RA: 9.09 Mean Diff: 0.001 BAF: 1.100  
 Reported Results: Pass-APS % RA: 9.09 Mean Diff: 0.001 BAF: 1.100

Operating Level: H

Run	Start Date	Time	End Date	Time	Reference Status	Monitoring Method	Gross Load Value	or Velocity
1	04/17/2003	0702	04/17/2003	0723	1	0.011	0.010	164
2	04/17/2003	0736	04/17/2003	0757	1	0.011	0.010	163
3	04/17/2003	0809	04/17/2003	0830	1	0.011	0.010	162
4	04/17/2003	0850	04/17/2003	0911	1	0.011	0.010	160
5	04/17/2003	0923	04/17/2003	0944	1	0.011	0.010	160
6	04/17/2003	1000	04/17/2003	1021	1	0.011	0.010	159
7	04/17/2003	1035	04/17/2003	1056	1	0.011	0.010	158
8	04/17/2003	1116	04/17/2003	1137	1	0.011	0.010	157
9	04/17/2003	1148	04/17/2003	1209	1	0.011	0.010	157

Summary Statistics	Reported	Recalculated
Mean of Monitoring System	0.010	0.010
Mean of Reference Method Values	0.011	0.011
Mean of Difference	0.001	0.001
Standard Deviation of Difference	0.000	0.000
Confidence Coefficient	0.000	0.000
T-Value	2.306	2.306
Relative Accuracy:	9.09	9.09
Bias Adjustment Factor	1.100	1.100
APS Flag	1	1
Indicator of Normal Op. Level	N	N
Gross Unit Load or Velocity	160	160
Reference Method Used	7e,3a	

Unit 1B Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 07/01/03 to 07/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer and Model No.: Thermal Environmental 42CLS

Process Unit Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 1C)

Date of Latest CMS Certification or Audit October 2003

Total source operating time in reporting period<sup>1</sup>: 3428.25

Emission Data Summary <sup>1</sup>		CMS Performance Summary <sup>2</sup>	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/Shutdown	<u>230</u>	a. Monitor equipment malfunctions	<u>0</u>
b. Control equipment problems	<u>0</u>	b. Non-Monitor equipment malfunctions	<u>0</u>
c. Process problems	<u>5</u>	c. Quality assurance calibration	<u>0</u>
d. Other known causes	<u>0</u>	d. Other known causes	<u>0</u>
e. Unknown causes	<u>0</u>	e. Unknown causes	<u>0</u>
2. Total duration of excess emission	<u>235</u>	2. Total CMS Downtime	<u>0</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time	<u>7 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time	<u>0%</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

**BAYSIDE POWER STATION - CT 1C**  
**24 - HOUR BLOCK AVERAGE - QUARTER 3, 2003**

<b>Date</b>	<b>24-hour block CO</b>	<b>24-hour block NOx</b>
07/01/2003	0.7	3.0
07/02/2003	0.8	3.1
07/03/2003	0.8	3.3
07/04/2003	1.5	3.1
07/05/2003	0.7	3.0
07/06/2003	0.7	3.0
07/07/2003	0.7	3.0
07/08/2003	0.7	3.0
07/09/2003	0.7	3.0
07/10/2003	0.7	3.0
07/11/2003	0.7	3.0
07/12/2003	0.8	3.0
07/13/2003	0.7	3.0
07/14/2003	0.7	3.0
07/15/2003	0.9	3.0
07/16/2003	0.8	3.0
07/17/2003	0.8	3.0
07/18/2003	Offline	Offline
07/19/2003	Offline	Offline
07/20/2003	0.0	0.0
07/21/2003	0.9	3.1
07/22/2003	0.8	3.0
07/23/2003	0.9	3.0
07/24/2003	0.8	3.0
07/25/2003	0.9	3.0
07/26/2003	0.8	3.0
07/27/2003	0.8	3.0
07/28/2003	0.8	3.0
07/29/2003	0.9	3.0
07/30/2003	0.8	3.0
07/31/2003	0.9	3.0
08/01/2003	0.9	3.0
08/02/2003	0.9	3.0
08/03/2003	0.9	3.0
08/04/2003	0.9	3.0
08/05/2003	0.9	3.0
08/06/2003	0.9	3.0
08/07/2003	0.9	3.0
08/08/2003	0.9	2.9
08/09/2003	0.9	2.9
08/10/2003	0.9	3.0
08/11/2003	0.9	3.0
08/12/2003	0.9	3.1
08/13/2003	0.9	3.0
08/14/2003	0.9	3.0
08/15/2003	1.0	2.9
08/16/2003	0.9	2.9
08/17/2003	1.1	2.9
08/18/2003	0.8	2.9

08/19/2003	0.7	3.2
08/20/2003	0.5	2.9
08/21/2003	0.6	2.9
08/22/2003	0.5	2.9
08/23/2003	0.6	2.7
08/24/2003	0.6	3.0
08/25/2003	0.6	2.9
08/26/2003	2.1	3.5
08/27/2003	0.6	2.9
08/28/2003	0.6	2.9
08/29/2003	0.7	2.9
08/30/2003	0.6	2.9
08/31/2003	0.6	2.9
09/01/2003	0.6	2.9
09/02/2003	0.7	3.1
09/03/2003	1.2	2.7
09/04/2003	0.8	2.9
09/05/2003	0.7	2.9
09/06/2003	0.6	2.9
09/07/2003	0.7	2.9
09/08/2003	0.7	3.0
09/09/2003	0.8	2.9
09/10/2003	0.8	2.9
09/11/2003	0.8	3.0
09/12/2003	0.8	2.9
09/13/2003	0.8	2.9
09/14/2003	0.8	2.9
09/15/2003	0.8	2.9
09/16/2003	0.8	2.9
09/17/2003	0.8	2.9
09/18/2003	0.9	2.9
09/19/2003	0.8	2.9
09/20/2003	0.8	2.9
09/21/2003	0.8	2.9
09/22/2003	0.8	2.9
09/23/2003	0.9	3.1
09/24/2003	0.8	2.9
09/25/2003	0.8	2.9
09/26/2003	0.8	2.9
09/27/2003	0.8	2.9
09/28/2003	0.9	2.9
09/29/2003	0.8	2.9
09/30/2003	0.9	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



BAYSIDE POWER STATION - CT 1C  
EXCLUDED DATA - QUARTER 3, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
07/01/2003	0800	14.9	139.8	Start-up
07/03/2003	0100	31.2	1066.9	Shutdown
	0800	35.2	362.3	Start-up
07/04/2003	2300	35	1582.7	Shutdown
07/05/2003	1000	25.7	115.8	Start-up
	2100	6.7	59.5	Shutdown
07/06/2003	1000	38.8	390.7	Start-up
	1100	18.5	49.5	Start-up
07/07/2003	2300	47.8	672.8	Shutdown
07/08/2003	0800	37.1	255.9	Start-up
	2200	16.4	346.1	Shutdown
07/09/2003	1600	32.8	363.1	Start-up
	1700	36.6	195.5	Start-up
07/14/2003	2300	36.4	525.6	Shutdown
07/15/2003	0800	17	81.2	Start-up
07/17/2003	2400	7.3	264.2	Shutdown
07/20/2003	1100	29.7	427.4	Start-up
	1200	45.8	511.4	Shutdown
	2000	34	297	Cold Steam Turbine Start-up
	2100	56.8	185.8	Cold Steam Turbine Start-up
	2200	58.1	182.9	Cold Steam Turbine Start-up
	2300	57.1	190.8	Cold Steam Turbine Start-up
	2400	52.8	182.7	Cold Steam Turbine Start-up
07/21/2003	2300	15.3	421.3	Shutdown
07/22/2003	0700	23.2	160.5	Start-up
07/23/2003	1400	13	108.5	Cold Steam Turbine Start-up
	1500	32.3	308.2	Cold Steam Turbine Start-up
	1600	35.4	349.5	Cold Steam Turbine Start-up
	1700	9.9	12	Cold Steam Turbine Start-up
07/25/2003	2200	8.5	96	Shutdown
07/26/2003	0900	35.8	448.7	Start-up
	1000	20.3	44.6	Start-up
07/27/2003	2400	9.1	111.8	Shutdown
07/28/2003	0800	22.4	149.8	Start-up
07/29/2003	2400	15.7	722.9	Shutdown
07/30/2003	0900	40.4	299.5	Start-up
08/01/2003	2300	8.9	105.8	Shutdown
08/02/2003	0800	25.6	435.9	Start-up
	0900	15	53.2	Start-up
	2300	16.9	572.1	Shutdown
08/03/2003	1100	22.6	488	Start-up
	1200	22.1	88.3	Start-up
08/07/2003	2300	6.7	69.3	Shutdown
08/08/2003	0800	34.1	215.3	Start-up
08/09/2003	0100	29	501.4	Shutdown
	0900	21.5	104.2	Start-up
	2300	8.7	303.8	Shutdown
08/10/2003	1000	28	252.8	Start-up

08/11/2003	0100	6.2	61.1	Shutdown
	0700	5.6	151.8	Start-up
	2400	6.5	66.3	Shutdown
08/12/2003	0600	*	549.1	Start-up
	0700	13	51.2	Start-up
	2400	12.1	144.7	Shutdown
08/13/2003	0600	30.5	379.3	Start-up
	0700	9.7	26.1	Start-up
08/14/2003	2100	8	252.6	Shutdown
08/15/2003	0800	28.3	197.8	Start-up
	2400	30.7	506.9	Shutdown
08/16/2003	0700	34	503.9	Start-up
	0800	8.5	17.3	Start-up
08/18/2003	2100	21.7	342.2	Shutdown
08/19/2003	0600	39.7	357.8	Start-up
	2300	27.7	430.1	Shutdown
08/20/2003	0900	36.1	503.2	Start-up
	1000	13.2	19.8	Start-up
08/21/2003	2300	14.8	694.4	Shutdown
08/22/2003	1000	25.6	174.3	Start-up
08/23/2003	0500	14.1	140.2	Malfunction
	0600	27.9	250.9	Malfunction
	0700	28	268.3	Malfunction
	0800	28.7	265.9	Malfunction
	0900	29.1	195.4	Malfunction
08/24/2003	2400	7.9	80.1	Shutdown
08/25/2003	0900	24.3	162.5	Start-up
	2300	8	89.4	Shutdown
08/26/2003	1000	*	391.3	Start-up
	1100	11.8	2.7	Start-up
08/27/2003	2400	17.2	317.7	Shutdown
08/28/2003	0600	18	129.1	Start-up
	2200	6.3	65.8	Shutdown
08/29/2003	0800	36.7	181.7	Start-up
	2400	8.9	99.5	Shutdown
08/30/2003	0900	27.2	498.1	Start-up
	1000	18.1	52.4	Start-up
08/31/2003	2400	18.9	255.1	Shutdown
09/01/2003	0900	38.6	427	Start-up
	1000	10.9	16.6	Start-up
	2400	10.5	126.6	Shutdown
09/02/2003	0800	*	141.2	Start-up
	0900	15.5	78.6	Start-up
	2200	12.6	165.2	Shutdown
09/03/2003	0700	23.6	596	Start-up
	0800	39.7	1372.1	Shutdown
	1100	18.9	91	Start-up
	2200	18.3	300	Shutdown
09/04/2003	0700	20	501	Start-up
	0800	15	56.2	Start-up
09/06/2003	0100	21.9	363.6	Shutdown
	0700	19.3	255.8	Start-up

09/08/2003	2400	*	56.2	Shutdown
09/09/2003	0100	*	2510.8	Shutdown
	1000	23.1	136.6	Start-up
09/10/2003	2400	9.1	187.3	Shutdown
09/11/2003	0500	*	530.9	Start-up
	0600	*	93.2	Start-up
09/12/2003	2400	15.8	576.5	Shutdown
09/13/2003	0900	32.2	424.5	Start-up
	1000	22.1	96.9	Start-up
09/15/2003	0100	20.3	311.5	Shutdown
	0600	25.3	138.2	Start-up
09/16/2003	0200	36.2	616	Shutdown
	0700	20.3	133.7	Start-up
09/17/2003	0200	25.7	427	Shutdown
	0600	26.1	208.5	Start-up
09/19/2003	2100	22.2	378.2	Shutdown
09/20/2003	0800	16.2	631.5	Start-up
	0900	23.7	122.8	Start-up
09/23/2003	0100	13.5	559.8	Shutdown
	0600	30.2	436.2	Start-up
09/24/2003	0100	24.8	420.5	Shutdown
	0700	22.8	124	Start-up
09/26/2003	0100	16.1	859.9	Shutdown
	0800	*	17.2	Start-up
	0900	23.6	104.7	Start-up
09/28/2003	2400	6.4	40.8	Shutdown
09/29/2003	0100	10.4	2533.1	Shutdown
	0700	38.7	409.6	Start-up
	0800	12.4	30.8	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1C  
MAINTENANCE/REPAIR OF CEMS - QUARTER 3, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1C  
MONITOR DOWNTIME - QUARTER 3, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability	100%
----------------------	------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

1404 total hours

NOx: 40 CFR 75, Appendix B  
 CO: 40 CFR 60, Appendix F  
 Date RATA data

RATA data required pursuant to these CFRs

**MONITORING DATA CHECKING SOFTWARE 4.1 BETA**  
 TEST SUMMARY REPORT

05/28/2003

PAGE 1

ORIS Code: 7873 State: FL  
 Facility Name: BAYSIDE County: HILLSBOROUGH

```

=====
Unit/                               Reported Recalculated
Stack   Sys Comp Test              Hour/ Test Load   Test Test
ID   Comp/Sys Parm Type              End Date  Time #   Lvl Reason Result Result
=====
CT1C   /313 NOX      RATA (RT 610-616)    04/18/2003 1110 1   1   C   Pass-APS Pass-APS
                MONITORING DATA CHECKING SOFTWARE 4.1 BETA
                RATA REPORT (RT 610/611)                                05/28/2003
                PAGE 2
  
```

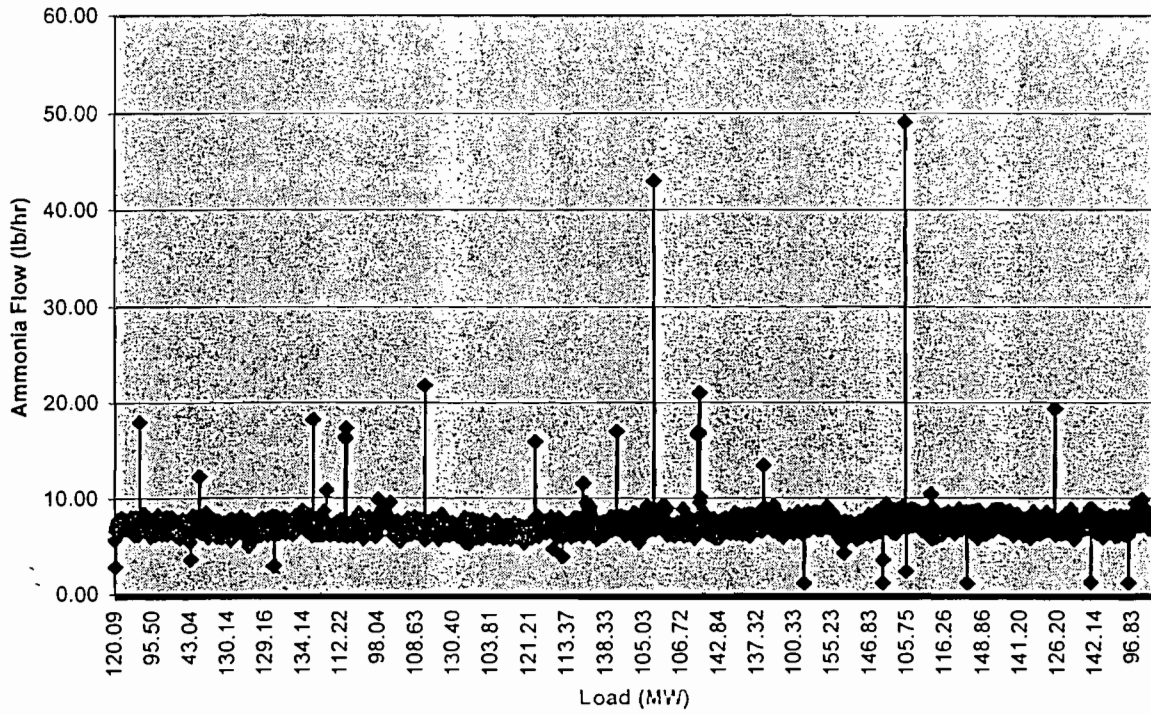
ORIS Code: 7873 Facility: BAYSIDE State: FL  
 Unit/Stack ID: CT1C System ID: 313 Parameter: NOX  
 Test End Date/Time: 04/18/2003 1110 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU  
 Reason for Test: C  
 Performance Spec: <= 10.0% Next RATA: Four Op Qtrs  
 Recalc. Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111  
 Reported Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111

Operating Level: H

Run	Start Date	Time	End Run	End Date	Reference	Monitoring	Gross Load
	Start Date	Time	End Date	Time	Status	Method	Value or Velocity
1	04/18/2003	0601	04/18/2003	0622	1	0.011	0.010 168
2	04/18/2003	0652	04/18/2003	0713	1	0.012	0.010 168
3	04/18/2003	0725	04/18/2003	0746	1	0.012	0.010 167
4	04/18/2003	0757	04/18/2003	0818	1	0.012	0.010 165
5	04/18/2003	0830	04/18/2003	0851	1	0.012	0.010 163
6	04/18/2003	0904	04/18/2003	0925	1	0.012	0.010 162
7	04/18/2003	0941	04/18/2003	1002	1	0.011	0.010 161
8	04/18/2003	1014	04/18/2003	1035	1	0.011	0.010 160
9	04/18/2003	1049	04/18/2003	1110	1	0.011	0.010 159

Summary Statistics	Reported	Recalculated
Mean of Monitoring System	0.010	0.010
Mean of Reference Method Values	0.012	0.012
Mean of Difference	0.002	0.002
Standard Deviation of Difference	0.001	0.001
Confidence Coefficient	0.000	0.000
T-Value	2.306	2.306
Relative Accuracy:	16.97	16.97
Bias Adjustment Factor	1.111	1.111
APS Flag	1	1
Indicator of Normal Op. Level	N	N
Gross Unit Load or Velocity	164	164
Reference Method Used	7e,3a	

Unit 1C Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# **Attachment 3**



**BAYSIDE POWER STATION - CT 1A**  
**24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003**

<b>Date</b>	<b>24-hour block CO</b>	<b>24-hour block NOx</b>
10/01/2003	0.5	2.9
10/02/2003	0.3	2.9
10/03/2003	0.2	3.0
10/04/2003	Offline	Offline
10/05/2003	Offline	Offline
10/06/2003	Offline	Offline
10/07/2003	1.5	2.9
10/08/2003	1.3	2.9
10/09/2003	0.4	3.1
10/10/2003	0.2	2.9
10/11/2003	0.2	2.9
10/12/2003	0.3	2.9
10/13/2003	0.3	2.9
10/14/2003	0.3	2.9
10/15/2003	1.3	2.9
10/16/2003	1.3	2.9
10/17/2003	1.4	2.9
10/18/2003	2.2	2.9
10/19/2003	0.7	2.9
10/20/2003	0.7	2.9
10/21/2003	0.8	2.8
10/22/2003	0.8	2.9
10/23/2003	0.8	2.9
10/24/2003	0.9	2.9
10/25/2003	0.9	2.9
10/26/2003	0.9	2.9
10/27/2003	1.0	2.9
10/28/2003	0.9	2.9
10/29/2003	1.0	2.9
10/30/2003	1.0	2.9
10/31/2003	1.0	2.9
11/01/2003	1.0	2.9
11/02/2003	1.4	3.0
11/03/2003	Offline	Offline
11/04/2003	0.0	0.0
11/05/2003	0.0	0.0
11/06/2003	1.1	2.9
11/07/2003	0.9	2.9
11/08/2003	0.9	2.9
11/09/2003	0.9	2.9
11/10/2003	0.9	2.9
11/11/2003	0.4	2.9
11/12/2003	0.2	3.0
11/13/2003	0.2	1.9
11/14/2003	0.3	2.5
11/15/2003	0.3	2.9
11/16/2003	0.4	2.9
11/17/2003	0.4	3.2
11/18/2003	0.4	2.9

11/19/2003	0.4	2.8
11/20/2003	0.5	3.2
11/21/2003	0.5	2.9
11/22/2003	1.1	3.1
11/23/2003	0.5	2.9
11/24/2003	0.7	3.4
11/25/2003	0.6	3.0
11/26/2003	0.7	3.0
11/27/2003	0.6	2.9
11/28/2003	0.5	2.9
11/29/2003	0.7	2.9
11/30/2003	0.6	2.9
12/01/2003	0.7	2.9
12/02/2003	0.7	2.9
12/03/2003	0.7	3.0
12/04/2003	0.6	2.9
12/05/2003	0.7	3.0
12/06/2003	0.8	2.9
12/07/2003	0.9	2.9
12/08/2003	0.9	2.9
12/09/2003	0.9	2.9
12/10/2003	0.8	2.9
12/11/2003	0.8	2.9
12/12/2003	0.9	2.9
12/13/2003	0.9	2.9
12/14/2003	0.8	2.9
12/15/2003	Offline	Offline
12/16/2003	Offline	Offline
12/17/2003	Offline	Offline
12/18/2003	Offline	Offline
12/19/2003	Offline	Offline
12/20/2003	Offline	Offline
12/21/2003	0.0	0.0
12/22/2003	Offline	Offline
12/23/2003	1.1	2.9
12/24/2003	1.2	2.9
12/25/2003	1.1	2.9
12/26/2003	1.2	2.9
12/27/2003	1.3	2.9
12/28/2003	0.0	0.0
12/29/2003	1.2	3.0
12/30/2003	1.2	3.1
12/31/2003	1.3	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific

**BAYSIDE POWER STATION - CT 1A  
EXCLUDED DATA - QUARTER 4, 2003**

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
10/02/2003	0000	17.3	348.2	Shutdown
	0700	16.9	230.6	Start-up
	0800	16.9	26.1	Start-up
	2200	9.4	104.6	Shutdown
10/03/2003	1000	42.1	111.2	Start-up
	2100	38.8	942.0	Shutdown
10/07/2003	0600	45.8	*	Start-up
	0700	54.3	*	Start-up
	0900	15.5	19.4	Start-up
	2400	27.3	364.5	Shutdown
10/08/2003	0600	17.2	473.2	Start-up
	0700	18.5	92.4	Start-up
	2200	9.7	177.2	Shutdown
10/09/2003	0600	*	35.1	Start-up
	0700	22.3	113.5	Start-up
10/13/2003	0100	29.6	433.4	Shutdown
	0600	25.0	153.9	Start-up
10/14/2003	0100	29.6	433.4	Shutdown
	0600	25.0	153.9	Start-up
10/15/2003	0200	46.2	243.1	Malfunction
10/16/2003	2200	9.2	99.2	Shutdown
10/17/2003	0500	48.4	153.4	Start-up
	2300	5.9	20.1	Shutdown
10/18/2003	0700	15.2	428.4	Start-up
	0800	24.1	80.4	Start-up
10/19/2003	0000	9.6	103.6	Shutdown
	0600	33.9	156.7	Start-up
10/20/2003	2300	11.0	132.8	Shutdown
10/21/2003	0400	5.7	474.3	Start-up
	0500	30.4	179.2	Start-up
10/26/2003	1000	35.4	231.6	Start-up
10/29/2003	2300	8.7	146.6	Shutdown
10/30/2003	1100	28.4	145.5	Start-up
	2100	15.0	505.2	Shutdown
10/31/2003	1300	44.8	316.2	Start-up
	1400	26.3	61.7	Start-up
	1500	7.1	*	tuning
	1600	7.0	*	tuning
	1700	5.2	*	tuning
	2000	7.0	259.3	Shutdown
11/01/2003	0700	11.6	577.9	Start-up
	0900	36.5	216.4	Start-up
11/02/2003	0100	7.2	79.2	Shutdown
	0900	43.5	319.9	Start-up
	1000	19.9	*	Start-up
11/04/2003	1900	32.6	401.1	Start-up/ Shutdown
11/05/2003	1400	41.6	260.4	tuning
	1500	48.9	189.1	tuning
	1600	50.3	185.2	tuning
	1700	50.1	213.7	tuning
	1800	49.9	215.6	tuning
	1900	49.8	218.8	tuning
	2000	49.3	219.2	tuning
	2100	49	220.3	tuning
	2200	49.6	218.2	tuning
11/06/2003	0100	50.3	215.7	tuning
	0200	49.9	218.9	tuning
	0300	51.5	212.7	tuning
	0400	51.2	217.6	tuning
	0500	48.2	280.4	tuning
	0600	26.9	100.1	tuning

	0800	22.4	296.6	tuning
	1500	22.4	136.1	Start-up
	2200	13.2	196.9	Shutdown
11/07/2003	1000	13.5	586.5	Start-up
	1100	24.4	76.9	Start-up
11/09/2003	1700	21.7	312	Shutdown
11/10/2003	0900	36.6	254.8	Start-up
	2300	10.8	176.9	Shutdown
11/11/2003	0600	25.2	136.8	Start-up
11/12/2003	0000	9.9	213.3	Shutdown
	1000	38.1	194.5	Start-up
	2300	15.2	661.7	Shutdown
11/13/2003	0800	33.7	372.1	Start-up
	0900	20.8	90.5	Start-up
11/17/2003	0100	9.9	98.8	Shutdown
	0600	48.3	348.7	Start-up
11/18/2003	2300	13.4	190.4	Shutdown
11/19/2003	0700	23.5	129.3	Start-up
	2300	7.1	65.4	Shutdown
11/20/2003	0500	46.2	314.3	Start-up
11/21/2003	2200	6.8	64	Shutdown
11/22/2003	0700	23.6	448.6	Start-up
	0800	33.6	186.9	Start-up
	2300	27	1358.4	Shutdown
11/23/2003	0800	25.6	118.4	Start-up
11/24/2003	0000	14.7	194.4	Shutdown
	0700	42.9	396.3	Start-up
11/25/2003	0000	6.6	66.9	Shutdown
	0600	12.6	518.5	Start-up
	0700	12.2	120.7	Start-up
11/26/2003	0100	41.9	1095.3	Shutdown
	0600	40.4	462.7	Start-up
	0700	15.8	53.7	Start-up
11/27/2003	0000	8.9	90.5	Shutdown
	0800	*	60.2	Start-up
	0900	26.6	158.6	Start-up
11/28/2003	0800	23.6	463.8	Start-up
	0900	29.3	203.8	Start-up
12/02/2003	0100	8.8	156.7	Shutdown
	0600	*	192.1	Start-up
	0700	26.3	109.8	Start-up
12/04/2003	0000	11.3	130.3	Shutdown
	0600	43.3	245.8	Start-up
12/05/2003	0200	10	240.6	Shutdown
	0600	27	414.1	Start-up
	0700	17.7	89.6	Start-up
12/09/2003	0200	12.2	151.8	Shutdown
	0700	41.8	237.4	Start-up
12/14/2003	1900	15.8	182.7	Shutdown
12/21/2003	0200	52.1	295.9	Shutdown
	0300	54.5	376.2	Shutdown
12/23/2003	0600	19.6	435.7	Start-up
	0700	40	221.9	Start-up
12/26/2003	2300	8.2	101.7	Shutdown
12/27/2003	0600	42	470.7	Start-up
	0700	33.1	177.5	Start-up
	1100	5.3	32	Shutdown
12/28/2003	0100	8.1	2403.3	Shutdown
12/29/2003	1000	45.2	426.6	Start-up
12/30/2003	0100	13.2	663.1	Shutdown
	0600	39.4	377.7	Start-up
	0700	22.8	77.4	Start-up
	2200	*	157.2	Shutdown
12/31/2003	0600	46	250.1	Start-up
	1100	15.3	160.2	Shutdown
	1800	31.5	146.3	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

BAYSIDE POWER STATION - CT 1A  
MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
10/18/2003	Replaced Umbilical on Unit 1A CEM System

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

**BAYSIDE POWER STATION - CT 1A  
MONITOR DOWNTIME - QUARTER 4, 2003**

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
10/07/2003	3	CO Monitor failed Calibration/ Re-calibration
10/10/2003	2	CO Monitor failed Calibration/ Re-calibration
10/14/2003	14	CO Monitor failed Calibration/ Re-calibration
10/15/2003	14	CO calibration monitor problems
10/18/2003	7	Replaced Umbilical on Unit 1A CEM System

Monitor availability:	97.37%
-----------------------	--------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-1A  
Test Date: 11/21/03

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference lbs/mmbtu	Run Flag
	Start	Stop		RM - 7E NO <sub>x</sub> ppmvd	RM - 3A O <sub>2</sub> %v, dry	RM - 19 NO <sub>x</sub> lbs/mmBtu	RM - 19 NO <sub>x</sub> lbs/mmBtu			
1	11:07	11:39	160	3.75	14.18	0.012	0.011	0.001	1	
2	11:51	12:12	159	3.78	14.29	0.012	0.011	0.001	1	
3	12:21	12:42	159	3.78	14.29	0.012	0.011	0.001	1	
4	12:50	13:11	158	3.78	14.31	0.012	0.011	0.001	1	
5	13:19	13:40	158	3.78	14.31	0.012	0.011	0.001	1	
6	13:48	14:09	157	3.88	14.31	0.013	0.011	0.002	1	
7	14:19	14:40	157	3.78	14.32	0.012	0.011	0.001	1	
8	14:50	15:11	157	3.78	14.32	0.012	0.011	0.001	1	
9	15:18	15:39	157	3.78	14.32	0.012	0.011	0.001	1	
Means:			158			0.012	0.011	0.001		

Standard Deviation of Differences: 0.000  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.000  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 11.29  
 Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001  
 Bias Test: FAILED  
 Bias Adjustment Factor (BAF): 1.101  
 Alternative Bias Adjustment Factor (BAF): N/A



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-1A  
Test Date: 11/21/03

Run Number	Run Times Start	Run Times Stop	Unit Load	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume dry	Run Flag
1	11:07	11:39	160	3.95	4.161	-0.211	1
2	11:51	12:12	159	3.96	4.162	-0.202	1
3	12:21	12:42	159	3.98	4.162	-0.182	1
4	12:50	13:11	158	3.97	4.157	-0.187	1
5	13:19	13:40	158	3.98	4.156	-0.176	1
6	13:48	14:09	157	3.95	4.150	-0.200	1
7	14:19	14:40	157	3.95	4.148	-0.198	1
8	14:50	15:11	157	3.95	4.140	-0.190	1
9	15:18	15:39	157	3.95	4.140	-0.190	1
		Means:	158	3.960	4.153	-0.193	

Standard Deviation of Differences: 0.011  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.008  
 Relative Accuracy (RA): 5.08





Environmental Services  
Air Services Group

40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4  
RELATIVE ACCURACY TEST AUDIT

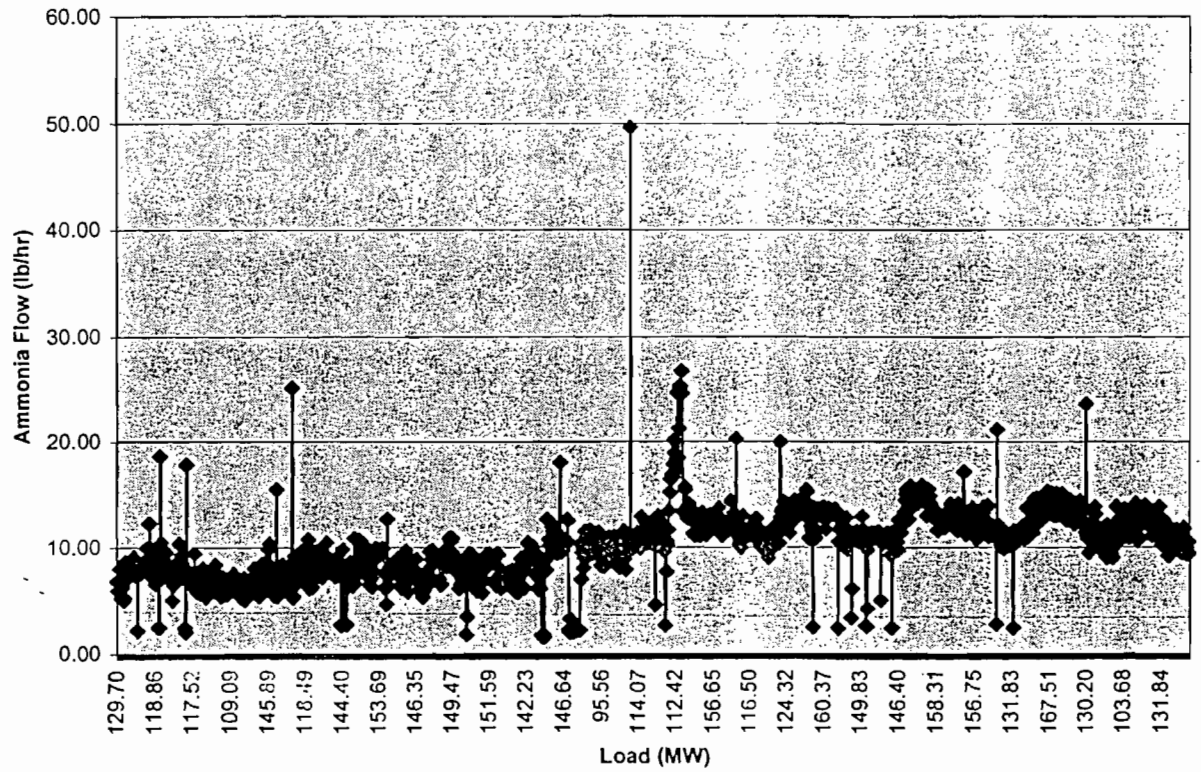
Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-1A  
Test Date: 11/21/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference		Run Flag
	Start	Stop		RM -10 CO ppmvd	RM - 3A O <sub>2</sub> %v, dry	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd @ 15% O <sub>2</sub>		
1	11:07	11:39	160	0.64	14.18	0.559	0.60	0.500	0.059	1	
2	11:51	12:12	159	0.77	14.29	0.691	0.60	0.500	0.191	1	
3	12:21	12:42	159	0.69	14.29	0.614	0.60	0.495	0.119	1	
4	12:50	13:11	158	0.70	14.31	0.626	0.60	0.491	0.135	1	
5	13:19	13:40	158	0.69	14.31	0.617	0.60	0.486	0.131	1	
6	13:48	14:09	157	0.77	14.31	0.693	0.60	0.491	0.202	1	
7	14:19	14:40	157	0.76	14.32	0.683	0.60	0.500	0.183	1	
8	14:50	15:11	157	0.84	14.32	0.757	0.60	0.495	0.262	1	
9	15:18	15:39	157	0.84	14.32	0.757	0.60	0.495	0.262	1	
		Means:	158			0.666		0.495	0.172		

Standard Deviation of Differences: 0.067  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.052  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 33.51 %  
 Relative Accuracy (RA), Calculated Against Applicable Standard: 2.86 %

Unit 1A Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**BAYSIDE POWER STATION - CT 1B**  
**24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003**

<b>Date</b>	<b>24-hour block CO</b>	<b>24-hour block NOx</b>
10/01/2003	1.6	3.0
10/02/2003	1.2	3.1
10/03/2003	1.9	3.0
10/04/2003	1.2	3.0
10/05/2003	1.2	2.9
10/06/2003	1.3	2.9
10/07/2003	1.3	3.0
10/08/2003	1.2	2.9
10/09/2003	1.2	3.1
10/10/2003	1.2	2.9
10/11/2003	1.2	3.0
10/12/2003	1.2	2.9
10/13/2003	1.2	2.9
10/14/2003	1.2	2.9
10/15/2003	1.2	2.9
10/16/2003	1.2	2.9
10/17/2003	1.3	3.0
10/18/2003	1.3	2.9
10/19/2003	1.2	2.9
10/20/2003	1.3	2.9
10/21/2003	1.3	3.0
10/22/2003	1.2	2.9
10/23/2003	1.3	2.9
10/24/2003	1.3	2.9
10/25/2003	1.7	3.2
10/26/2003	1.3	2.9
10/27/2003	1.3	2.9
10/28/2003	1.2	3.0
10/29/2003	1.3	2.9
10/30/2003	1.3	2.9
10/31/2003	1.3	2.9
11/01/2003	1.3	2.9
11/02/2003	1.3	2.9
11/03/2003	1.4	2.9
11/04/2003	1.6	3.0
11/05/2003	1.4	2.9
11/06/2003	1.4	2.9
11/07/2003	1.5	3.1
11/08/2003	1.6	3.1
11/09/2003	1.4	3.0
11/10/2003	1.1	2.9
11/11/2003	0.7	2.9
11/12/2003	0.7	2.9
11/13/2003	0.7	3.0
11/14/2003	0.7	2.9
11/15/2003	0.9	2.9
11/16/2003	0.8	2.9
11/17/2003	0.8	2.9
11/18/2003	0.8	2.9

11/19/2003	0.8	2.9
11/20/2003	0.8	2.9
11/21/2003	0.9	2.9
11/22/2003	0.8	2.9
11/23/2003	0.9	2.9
11/24/2003	0.8	2.9
11/25/2003	0.9	2.9
11/26/2003	0.9	2.9
11/27/2003	1.0	2.9
11/28/2003	0.9	2.9
11/29/2003	1.0	3.2
11/30/2003	0.9	2.9
12/01/2003	1.0	2.9
12/02/2003	1.0	2.9
12/03/2003	0.9	2.9
12/04/2003	0.9	2.9
12/05/2003	1.0	3.0
12/06/2003	1.1	2.9
12/07/2003	1.1	2.9
12/08/2003	1.1	2.9
12/09/2003	1.2	2.9
12/10/2003	Offline	Offline
12/11/2003	Offline	Offline
12/12/2003	Offline	Offline
12/13/2003	Offline	Offline
12/14/2003	Offline	Offline
12/15/2003	Offline	Offline
12/16/2003	Offline	Offline
12/17/2003	Offline	Offline
12/18/2003	Offline	Offline
12/19/2003	Offline	Offline
12/20/2003	Offline	Offline
12/21/2003	Offline	Offline
12/22/2003	Offline	Offline
12/23/2003	1.2	2.9
12/24/2003	0.0	5.0
12/25/2003	Offline	Offline
12/26/2003	1.2	2.9
12/27/2003	1.2	2.9
12/28/2003	1.5	2.9
12/29/2003	1.6	2.9
12/30/2003	Offline	Offline
12/31/2003	1.3	2.9

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

**BAYSIDE POWER STATION - CT 1B  
EXCLUDED DATA - QUARTER 4, 2003**

<b>Date</b>	<b>Hours Data Excluded</b>	<b>NOx Value of Excluded Data</b>	<b>CO Value of Excluded Data</b>	<b>Reason for Exclusion</b>
10/01/2003	0600	32.6	217.4	Start-up
	2400	26.2	1445.5	Shutdown
10/02/2003	0500	21.6	151.4	Start-up
	2300	*	47.2	Shutdown
	2400	*	2256	Shutdown
10/03/2003	0700	35.1	446.6	Start-up
	0800	13.5	*	Start-up
	2300	40.1	791.3	Shutdown
10/04/2003	0600	*	216.4	Start-up
	0700	34.9	157	Start-up
10/07/2003	0100	*	41.6	Shutdown
	0200	*	2282.3	Shutdown
	0500	43.1	446.6	Start-up
	0600	10.4	*	Start-up
10/08/2003	2300	9.3	165.8	Shutdown
10/09/2003	0600	36	286.8	Start-up
	2300	*	64.8	Shutdown
10/10/2003	0600	*	100.8	Start-up
	0700	17.2	110.4	Start-up
	2200	*	17.1	Shutdown
	2300	35.8	1476.9	Shutdown
10/11/2003	0800	*	14.2	Start-up
	0900	2.4	91.6	Start-up
	2200	8.8	165.8	Shutdown
10/12/2003	0700	40.1	388.1	Start-up
	0800	36.8	10.8	Start-up
	2300	20	879.9	Shutdown
10/13/2003	0600	34.1	440.4	Start-up
	0700	17.1	56.5	Start-up
	2400	9.3	118.6	Shutdown
10/14/2003	0500	16.9	610.7	Start-up
	0600	18.1	65	Start-up
	2200	19.6	352.4	Shutdown
10/15/2003	0500	*	4	Start-up
	0600	20.2	82.2	Start-up
	2300	34.1	430.7	Shutdown
10/16/2003	0500	12.5	426.7	Start-up
	0600	28	99.1	Start-up
	2100	9.1	101.9	Shutdown
10/17/2003	0400	27.3	411.6	Start-up
	0500	13.4	57.1	Start-up
10/18/2003	0100	32.5	1116.9	Shutdown
	0700	45.7	239.9	Start-up
10/19/2003	0100	21.4	350.1	Shutdown
	0800	16.6	493.1	Start-up
	0900	15.9	49.2	Start-up
10/20/2003	0100	12.2	167.8	Shutdown
	0600	27.7	398.8	Start-up

	0700	14.9	51.2	Start-up
10/21/2003	2300	45.3	1032.6	Shutdown
10/22/2003	0600	19.6	607.6	Start-up
	0700	20.5	75.1	Start-up
	2100	6.5	65	Shutdown
10/23/2003	0700	42.3	424.8	Start-up
	0800	20.9	69.9	Start-up
	2300	10.1	155.6	Shutdown
10/24/2003	0600	42.5	287.2	Start-up
	0700	24.3	98.2	Start-up
	2300	16.3	399.9	Shutdown
10/25/2003	0800	34.5	178.2	Start-up
	2400	6.7	227.4	Shutdown
10/26/2003	0900	20.7	112.6	Start-up
	2400	8	140.7	Shutdown
10/27/2003	0600	43.1	211.4	Start-up
	2400	*	32.5	Shutdown
10/28/2003	0100	*	1916.6	Shutdown
	0600	21.2	108.2	Start-up
	2300	18.7	276.7	Shutdown
10/29/2003	1100	39.5	157.1	Start-up
	2400	11.7	147.7	Shutdown
10/30/2003	0700	*	462.8	Start-up
	0800	27.6	73.3	Start-up
	2200	7.3	261.9	Shutdown
10/31/2003	0900	36.9	440.7	Start-up
	1000	15.1	18.3	Start-up
11/01/2003	2100	7.1	180.6	Shutdown
11/03/2003	1200	42.6	311.8	Start-up
	1300	28.7	89.1	Start-up
	2200	6.5	257	Shutdown
11/04/2003	1200	29.2	176	Start-up
	2400	12.5	384.7	Shutdown
11/05/2003	1300	15.3	142.5	Start-up
11/08/2003	0100	7.5	86	Shutdown
	0900	30.3	475.9	Start-up
11/09/2003	0100	8.9	383	Shutdown
	1000	41.6	488.8	Start-up
	1100	15.3	113.2	Start-up
	2000	11.6	132.1	Shutdown
11/10/2003	1000	37.6	201.9	Start-up
	1100	12.1	96.1	Start-up
11/13/2003	2200	29.9	343.3	Shutdown
11/14/2003	0700	50.7	333	Start-up
	0800	22.8	52.7	Start-up
11/15/2003	0100	32.6	412.1	Shutdown
	0800	21.9	103.4	Start-up
11/17/2003	2200	13.2	182.6	Shutdown
11/18/2003	1300	27.8	143.3	Start-up
11/20/2003	2300	16.2	705.7	Shutdown
11/21/2003	0500	26.5	441.6	Start-up
	0600	23.8	62.9	Start-up

	2400	11.1	145.6	Shutdown
11/22/2003	1000	29.7	452.8	Start-up
	1100	27.5	111.2	Start-up
	2400	8.6	99	Shutdown
11/23/2003	0900	23.1	508.5	Start-up
	1000	33.4	168.2	Start-up
11/24/2003	0100	7	253.3	Shutdown
	0600	14.3	451.2	Start-up
	0700	25.2	93.7	Start-up
11/29/2003	0100	12.9	151.4	Shutdown
	0600	84.7	149.2	Start-up
12/01/2003	2400	12.2	142.4	Shutdown
12/02/2003	0500	39.2	224.7	Start-up
12/04/2003	0200	9.4	364.2	Shutdown
	0700	43.1	219.1	Start-up
12/05/2003	2300	*	54.6	Shutdown
	2400	*	2231.1	Shutdown
12/06/2003	0800	41.9	416.1	Start-up
	0900	17.4	57.9	Start-up
12/08/2003	2400	8.7	163	Shutdown
12/09/2003	0600	37.8	174.2	Start-up
	2300	8.8	148.6	Shutdown
12/23/2003	0300	44.9	377.9	Start-up
	0400	35	113.3	Start-up
12/24/2003	100	7.1	167.9	Shutdown
12/26/2003	0500	41	322.1	Shutdown
	0600	76	201.7	Start-up
	1400	46.5	267.8	Start-up
12/29/2003	0100	31.5	718.8	Shutdown
	0600	32	373.9	Start-up
	0700	25.7	71.3	Start-up
	1100	18	364.9	Shutdown
12/31/2003	0900	7.8	651.2	Start-up
	1000	46.3	205.8	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

**BAYSIDE POWER STATION - CT 1B  
 MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003**

Date	Unusual Maint. Or. Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



BAYSIDE POWER STATION - CT 1B  
MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability:	100%
-----------------------	------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

NOx: 40 CFR 75, Appendix B  
 CO: 40 CFR 60, Appendix F  
 Date RATA data

RATA data required pursuant to these CFRs

**MONITORING DATA CHECKING SOFTWARE 4.1 BETA**  
 TEST SUMMARY REPORT

05/28/2003

PAGE 1

ORIS Code: 7873 State: FL  
 Facility Name: BAYSIDE County: HILLSBOROUGH

Unit/	Stack	Sys Comp	Test	Hour/	Test Load	Test	Test	Reported	Recalculated	
ID	Comp/Sys	Parm	Type	End Date	Time #	Lvs	Reason	Result	Result	
CT1B	/213	NOX	RATA (RT 610-616)	04/17/2003	1209	1	1	C	Pass-APS	Pass-APS

MONITORING DATA CHECKING SOFTWARE 4.1 BETA

05/28/2003

RATA REPORT (RT 610/611)

PAGE 2

ORIS Code: 7873 Facility: BAYSIDE State: FL  
 Unit/Stack ID: CT1B System ID: 213 Parameter: NOX  
 Test End Date/Time: 04/17/2003 1209 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU  
 Reason for Test: C  
 Performance Spec: <= 10.0% Next RATA: Four Op Qtrs  
 Recalc. Results: Pass-APS % RA: 9.09 Mean Diff: 0.001 BAF: 1.100  
 Reported Results: Pass-APS % RA: 9.09 Mean Diff: 0.001 BAF: 1.100

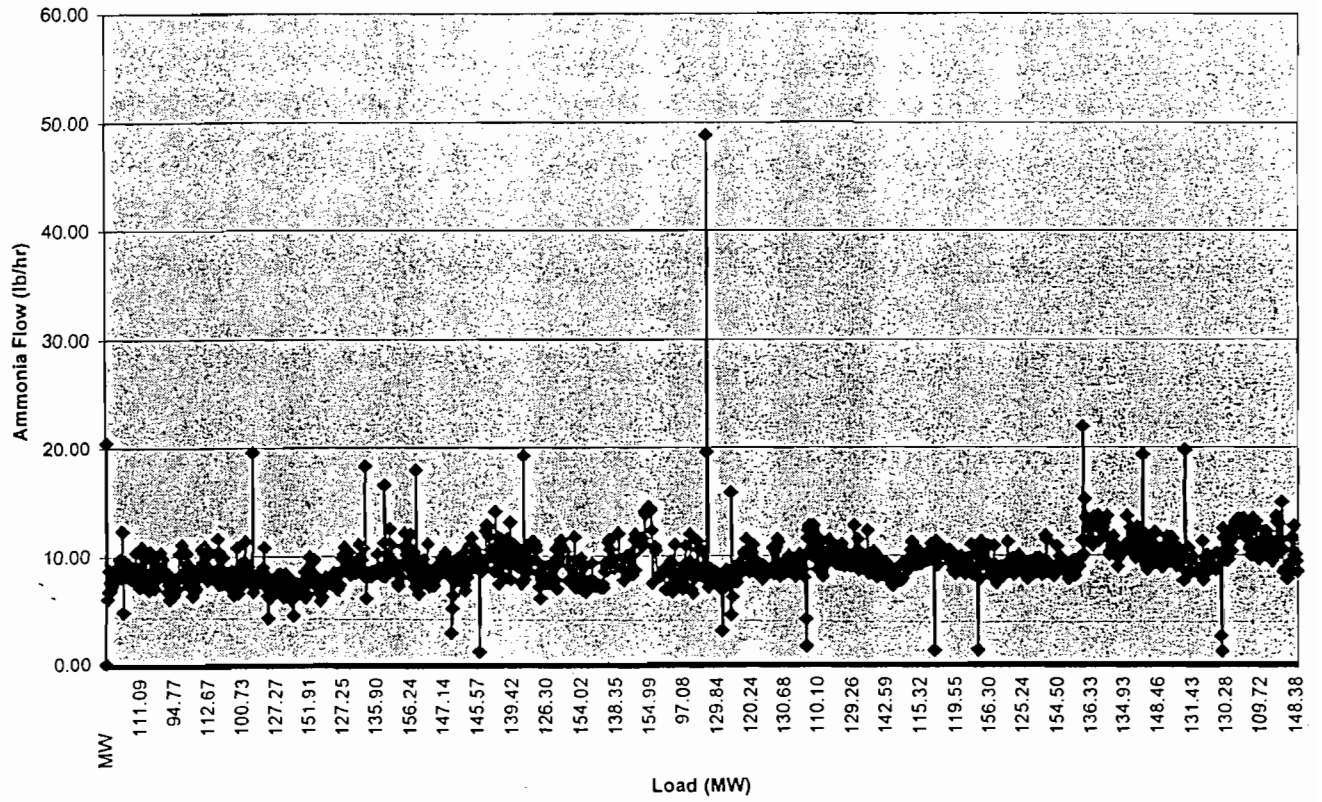
Operating Level: H

Run	Start Date	Time	End Date	Time	Reference	Monitoring	Gross Load
	Start	End	Run	End	Time	Method	Value or Velocity
1	04/17/2003	0702	04/17/2003	0723	1	0.011	0.010 164
2	04/17/2003	0736	04/17/2003	0757	1	0.011	0.010 163
3	04/17/2003	0809	04/17/2003	0830	1	0.011	0.010 162
4	04/17/2003	0850	04/17/2003	0911	1	0.011	0.010 160
5	04/17/2003	0923	04/17/2003	0944	1	0.011	0.010 160
6	04/17/2003	1000	04/17/2003	1021	1	0.011	0.010 159
7	04/17/2003	1035	04/17/2003	1056	1	0.011	0.010 158
8	04/17/2003	1116	04/17/2003	1137	1	0.011	0.010 157
9	04/17/2003	1148	04/17/2003	1209	1	0.011	0.010 157

Summary Statistics Reported Recalculated

Mean of Monitoring System	0.010	0.010
Mean of Reference Method Values	0.011	0.011
Mean of Difference	0.001	0.001
Standard Deviation of Difference	0.000	0.000
Confidence Coefficient	0.000	0.000
T-Value	2.306	2.306
Relative Accuracy:	9.09	9.09
Bias Adjustment Factor	1.100	1.100
APS Flag	1	1
Indicator of Normal Op. Level	N	N
Gross Unit Load or Velocity	160	160
Reference Method Used	7e,3a	

Unit 1B Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**BAYSIDE POWER STATION - CT 1C**  
**24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003**

<b>Date</b>	<b>24-hour block CO</b>	<b>24-hour block NOx</b>
10/01/2003	0.9	2.9
10/02/2003	1.0	2.9
10/03/2003	0.8	2.9
10/04/2003	0.9	2.9
10/05/2003	0.9	2.9
10/06/2003	1.0	2.9
10/07/2003	1.0	2.9
10/08/2003	1.0	2.9
10/09/2003	0.9	2.9
10/10/2003	1.1	2.9
10/11/2003	1.2	3.1
10/12/2003	0.9	2.9
10/13/2003	0.9	2.9
10/14/2003	0.9	2.9
10/15/2003	0.8	2.9
10/16/2003	0.7	2.9
10/17/2003	1.0	2.9
10/18/2003	1.0	2.9
10/19/2003	1.0	2.9
10/20/2003	1.0	3.0
10/21/2003	1.0	2.8
10/22/2003	0.9	2.9
10/23/2003	1.0	2.9
10/24/2003	1.0	2.9
10/25/2003	0.9	2.9
10/26/2003	0.9	2.9
10/27/2003	1.0	2.9
10/28/2003	0.0	0.0
10/29/2003	1.0	2.9
10/30/2003	0.9	2.9
10/31/2003	0.9	3.1
11/01/2003	1.0	2.9
11/02/2003	1.0	2.9
11/03/2003	Offline	Offline
11/04/2003	0.9	2.9
11/05/2003	0.9	2.9
11/06/2003	1.0	2.9
11/07/2003	1.2	2.9
11/08/2003	1.0	2.9
11/09/2003	1.0	2.9
11/10/2003	0.7	2.9
11/11/2003	0.4	2.8
11/12/2003	0.5	2.9
11/13/2003	0.4	1.8
11/14/2003	0.5	2.9
11/15/2003	0.5	2.9
11/16/2003	0.4	2.9
11/17/2003	0.4	3.0
11/18/2003	0.6	3.1

11/19/2003	0.3	2.9
11/20/2003	0.4	2.9
11/21/2003	0.5	2.9
11/22/2003	0.5	2.9
11/23/2003	0.5	2.9
11/24/2003	0.4	2.9
11/25/2003	0.5	2.9
11/26/2003	0.6	2.9
11/27/2003	0.6	2.9
11/28/2003	0.5	2.9
11/29/2003	0.8	2.9
11/30/2003	0.5	2.9
12/01/2003	0.6	2.9
12/02/2003	0.5	2.9
12/03/2003	0.5	2.9
12/04/2003	0.5	2.9
12/05/2003	0.6	2.9
12/06/2003	0.6	2.9
12/07/2003	0.6	3.1
12/08/2003	1.1	2.9
12/09/2003	0.7	2.9
12/10/2003	0.5	2.9
12/11/2003	0.6	2.9
12/12/2003	0.7	2.9
12/13/2003	0.8	2.9
12/14/2003	0.6	3.1
12/15/2003	Offline	Offline
12/16/2003	Offline	Offline
12/17/2003	Offline	Offline
12/18/2003	Offline	Offline
12/19/2003	Offline	Offline
12/20/2003	0.0	0.0
12/21/2003	Offline	Offline
12/22/2003	0.6	2.9
12/23/2003	0.7	2.9
12/24/2003	0.7	2.9
12/25/2003	0.7	3.0
12/26/2003	0.7	2.9
12/27/2003	0.7	2.9
12/28/2003	0.7	2.9
12/29/2003	0.7	2.9
12/30/2003	0.7	2.9
12/31/2003	0.7	3.0

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

**BAYSIDE POWER STATION - CT 1C**  
**EXCLUDED DATA - QUARTER 4, 2003**

<b>Date</b>	<b>Hours Data Excluded</b>	<b>NOx Value of Excluded Data</b>	<b>CO Value of Excluded Data</b>	<b>Reason for Exclusion</b>
10/01/2003	0100	16.1	889.7	Shutdown
	1000	35.5	225.8	Start-up
10/07/2003	2300	8.2	79	Shutdown
10/08/2003	0500	45.2	409.9	Start-up
	0600	11.4	33.7	Start-up
10/09/2003	2400	27.2	362.1	Shutdown
10/10/2003	0500	26.4	127.3	Start-up
10/11/2003	0100	7.3	71.3	Shutdown
	0700	44.8	404	Start-up
	0800	10.9	*	Start-up
	2400	*	31.4	Shutdown
10/12/2003	0100	19.6	1905.5	Shutdown
	0900	48.9	264.2	Start-up
10/13/2003	0100	35.5	502.9	Shutdown
	0700	39.1	438.2	Start-up
	0800	18.1	59	Start-up
10/14/2003	2200	7.3	82.3	Shutdown
10/15/2003	1000	28.5	430.7	Start-up
	1100	42.1	153.6	Start-up
	2100	13	369.4	Shutdown
10/16/2003	0700	64	253.8	Start-up
10/19/2003	2300	7.6	280.2	Shutdown
10/20/2003	0500	44.2	264.7	Start-up
	2300	7.8	84.3	Shutdown
10/21/2003	0600	44.4	240.7	Start-up
	2400	35.1	464.1	Shutdown
10/22/2003	0900	42.9	393.4	Start-up
	1000	23.9	77.3	Start-up
	2400	7.1	64.7	Shutdown
10/23/2003	0500	41.3	218.4	Start-up
	2200	7.5	59.8	Shutdown
10/24/2003	0600	19.2	160.2	Start-up
10/28/2003	0100	6.7	72.6	Shutdown
10/31/2003	2100	*	54.2	Shutdown
	2200	*	2487.9	Shutdown
11/01/2003	0800	35.3	148.7	Start-up
11/02/2003	2100	25.2	367.6	Shutdown
11/04/2003	1100	48	337.7	Start-up
	1200	27.3	95.7	Start-up
	2400	6.5	99.4	Shutdown
11/05/2003	1500	8.8	611.1	Start-up
	1600	18.6	83.9	Start-up
	1900	10.6	210.3	Shutdown
11/06/2003	0700	29	479.5	Start-up
	0800	18.6	63.6	Start-up
	2400	29	499.5	Shutdown
11/07/2003	0800	23	116.4	Start-up
	2400	14.9	522.6	Shutdown

11/08/2003	1000	32.6	230.9	Start-up
	2200	11	147.9	Shutdown
11/09/2003	0900	42.9	552.6	Start-up
	1000	16.8	77.8	Start-up
11/10/2003	2100	7.2	76.7	Shutdown
11/11/2003	1400	56.2	234.2	Start-up
	2300	7.7	79.1	Shutdown
11/12/2003	0900	31.4	163.2	Start-up
11/13/2003	0100	17.7	388.3	Shutdown
	0600	45.3	351.7	Start-up
	0700	19.2	13	Start-up
	2300	*	65.7	Shutdown
11/14/2003	1600	35.5	326.7	Start-up
	1700	24	67.7	Start-up
11/16/2003	0100	38.2	443.6	Shutdown
	0700	46.9	230.3	Start-up
11/17/2003	2200	*	17.4	Shutdown
	2300	40.4	1611.2	Shutdown
11/18/2003	0700	28.7	484.3	Start-up
	0800	24.9	86.3	Start-up
	2400	*	55.7	Shutdown
11/19/2003	0600	36.4	219.5	Start-up
11/21/2003	0100	40.3	557.4	Shutdown
	0700	36.7	143.9	Start-up
11/26/2003	0100	10.1	170.4	Shutdown
	0700	38.5	434.8	Start-up
	0800	9.8	87.7	Start-up
11/27/2003	0100	9.9	92.4	Shutdown
	0900	29.2	492.1	Start-up
	1000	19.7	69.8	Start-up
	2400	25.1	302.2	Shutdown
11/28/2003	0900	25.3	606.4	Start-up
	1000	24.4	84.3	Start-up
	2400	17.8	540	Shutdown
11/29/2003	0700	53.4	397.6	Start-up
	0800	15.6	*	Start-up
12/02/2003	2400	18	449.5	Shutdown
12/03/2003	0600	45	184.8	Start-up
12/05/2003	0100	31.2	463.5	Shutdown
	0500	35.4	416.8	Start-up
	0600	15.7	21.2	Start-up
	2300	23.5	305.3	Shutdown
12/06/2003	0800	46.9	181.2	Start-up
12/07/2003	2100	*	22.4	Shutdown
	2200	27	1455.6	Shutdown
12/08/2003	0600	55.3	433.1	Start-up
	0700	18.5	*	Start-up
12/11/2003	0100	6.2	26.6	Shutdown
	0200	21.1	1449.7	Shutdown
	0600	45.6	215.7	Start-up
12/12/2003	0100	17.9	208.6	Shutdown
	0500	38.8	157.6	Start-up

12/14/2003	2100	*	24.2	Shutdown
	2200	38.8	1371.9	Shutdown
12/20/2003	0800	27.2	537.2	Start-up
	0900	45.2	269.7	Shutdown
	1000	62.3	220.3	Start-up
	1100	43.3	1185.9	Shutdown
12/22/2003	0100	2	258.5	Cold Steam Turbine Start-up
	0200	57.1	214.1	Cold Steam Turbine Start-up
	0300	59.9	493.5	Cold Steam Turbine Start-up
	1000	51.7	467.2	Cold Steam Turbine Start-up
	1100	55.1	180.6	Cold Steam Turbine Start-up
	1200	44	168.1	Cold Steam Turbine Start-up
	1300	44.3	165.2	Cold Steam Turbine Start-up
	1400	44.8	162.8	Cold Steam Turbine Start-up
	1500	45.4	161.8	Cold Steam Turbine Start-up
	1600	45.5	522.5	Cold Steam Turbine Start-up
	1700	41.4	603.9	Cold Steam Turbine Start-up
	1800	43.4	547.4	Cold Steam Turbine Start-up
	1900	18.5	18.8	Cold Steam Turbine Start-up
12/27/2003	0100	8.5	105.2	Shutdown
	0700	39.5	394.8	Start-up
	0800	28.4	98.6	Start-up
12/31/2003	2200	*	40.8	Shutdown
	2300	*	2348	Shutdown

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



BAYSIDE POWER STATION - CT 1C  
 MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 1C  
MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability:	100%
-----------------------	------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

1404 total hours

NOx: 40 CFR 75, Appendix B  
 CO: 40 CFR 60, Appendix F  
 Date RATA data

RATA data required pursuant to these CFRs

**MONITORING DATA CHECKING SOFTWARE 4.1 BETA**  
 TEST SUMMARY REPORT

05/28/2003

PAGE 1

ORIS Code: 7873 State: FL  
 Facility Name: BAYSIDE County: HILLSBOROUGH

```

=====
Unit/          Reported Recalculated
Stack   Sys Comp Test      Hour/ Test Load   Test Test
ID Comp/Sys Parm Type Type   End Date Time #  Lvs Reason Result Result
=====
CT1C   /313 NOX   RATA (RT 610-616)  04/18/2003 1110 1 1  C  Pass-APS Pass-APS
                MONITORING DATA CHECKING SOFTWARE 4.1 BETA
                RATA REPORT (RT 610/611)                                PAGE 2
  
```

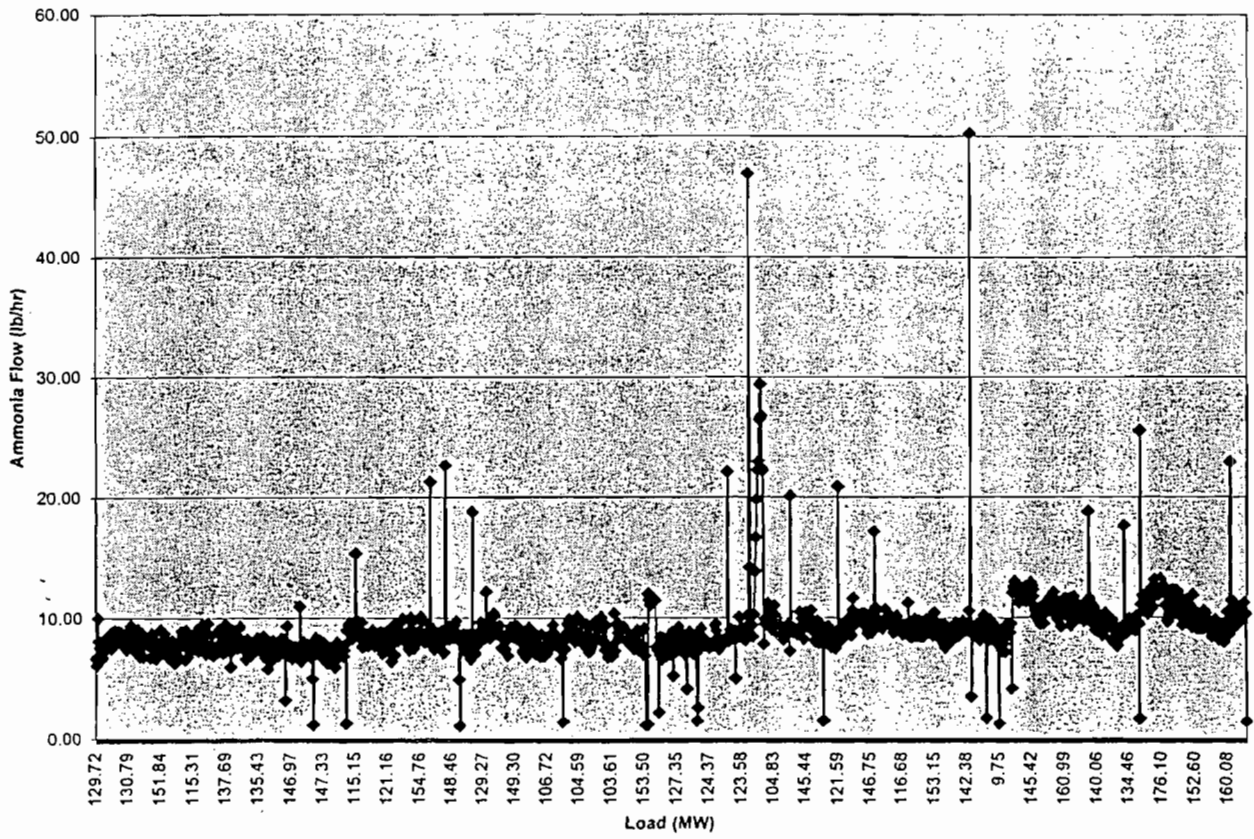
ORIS Code: 7873 Facility: BAYSIDE State: FL  
 Unit/Stack ID: CT1C System ID: 313 Parameter: NOX  
 Test End Date/Time: 04/18/2003 1110 Test No.: 1 # of Operating Levels: 1 Units of Measure: LB/MMBTU  
 Reason for Test: C  
 Performance Spec: <= 10.0% Next RATA: Four Op Qtrs  
 Recalc. Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111  
 Reported Results: Pass-APS % RA:16.97 Mean Diff: 0.002 BAF: 1.111

Operating Level: H

Run	Start Date	Start Time	End Run	End Date	Reference	Monitoring	Gross Load
					Time Status	Method	Value or Velocity
1	04/18/2003	0601	04/18/2003	0622	1	0.011	0.010 168
2	04/18/2003	0652	04/18/2003	0713	1	0.012	0.010 168
3	04/18/2003	0725	04/18/2003	0746	1	0.012	0.010 167
4	04/18/2003	0757	04/18/2003	0818	1	0.012	0.010 165
5	04/18/2003	0830	04/18/2003	0851	1	0.012	0.010 163
6	04/18/2003	0904	04/18/2003	0925	1	0.012	0.010 162
7	04/18/2003	0941	04/18/2003	1002	1	0.011	0.010 161
8	04/18/2003	1014	04/18/2003	1035	1	0.011	0.010 160
9	04/18/2003	1049	04/18/2003	1110	1	0.011	0.010 159

Summary Statistics	Reported	Recalculated
Mean of Monitoring System	0.010	0.010
Mean of Reference Method Values	0.012	0.012
Mean of Difference	0.002	0.002
Standard Deviation of Difference	0.001	0.001
Confidence Coefficient	0.000	0.000
T-Value	2.306	2.306
Relative Accuracy:	16.97	16.97
Bias Adjustment Factor	1.111	1.111
APS Flag	1	1
Indicator of Normal Op. Level	N	N
Gross Unit Load or Velocity	164	164
Reference Method Used	7e,3a	

Unit 1C Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# **Attachment 4**

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 10/01/03 to 012/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer and Model No.: Thermal Environmental 42CLS

Process Unit Description : 169 MW Combined Cycle Combustion Turbine (CT 2A)

Date of Latest CMS Certification or Audit: November 2003

Total source operating time in reporting period<sup>1</sup>: 71

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/Shutdown <u>6</u>	a. Monitor equipment malfunctions <u>0</u>
b. Control equipment problems <u>0</u>	b. Non-Monitor equipment malfunctions <u>0</u>
c. Process problems <u>0</u>	c. Quality assurance calibration <u>0</u>
d. Other known causes <u>0</u>	d. Other known causes <u>0</u>
e. Unknown causes <u>0</u>	e. Unknown causes <u>0</u>
2. Total duration of excess emission <u>6</u>	2. Total CMS Downtime <u>0</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time <u>8 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time <u>0%</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

BAYSIDE POWER STATION - CT 2A  
24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	1.1	3.0
12/21/2003	1.2	3.0
12/22/2003	1.2	3.1
12/23/2003	1.1	2.9
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

**BAYSIDE POWER STATION - CT 2A  
EXCLUDED DATA - QUARTER 4, 2003**

<b>Date</b>	<b>Hours Data Excluded</b>	<b>NOx Value of Excluded Data</b>	<b>CO Value of Excluded Data</b>	<b>Reason for Exclusion</b>
12/21/2003	0800	10.9	157.7	Shutdown
12/22/2003	0800	55	457.9	Start-up
	0900	62.6	275.8	Start-up
	1000	26.1	2.6	Start-up
12/23/2003	0500	30.9	172.4	Shutdown
	0600	45.5	336.9	Start-up

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.



SEASIDE POWER STATION - CT 2A  
MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2A  
MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability:	100.00%
-----------------------	---------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2A  
Test Date: 11/14/03

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference lbs/mmbtu	Run Flag
	Start	Stop		RM - 7E NO <sub>x</sub> ppmvd	RM - 3A O <sub>2</sub> %v, dry	RM - 19 NO <sub>x</sub> lbs/mmBtu	RM - 19 NO <sub>x</sub> lbs/mmBtu			
1	08:04	08:25	174	3.63	14.30	0.012	0.011	0.001	1	
2	08:47	09:08	173	3.67	14.28	0.012	0.011	0.001	1	
3	09:15	09:36	172	3.61	14.26	0.012	0.011	0.001	1	
4	09:44	10:05	170	3.57	14.26	0.012	0.011	0.001	1	
5	10:13	10:34	169	3.61	14.25	0.012	0.011	0.001	1	
6	10:41	11:02	167	3.62	14.26	0.012	0.011	0.001	1	
7	11:08	11:29	166	3.60	14.27	0.012	0.011	0.001	1	
8	11:38	11:59	164	3.62	14.25	0.012	0.011	0.001	1	
9	12:07	12:28	163	3.59	14.26	0.012	0.011	0.001	1	

Means: 169

0.012

0.011

0.001

Standard Deviation of Differences: 0.000  
Number of Valid Runs Included in Data Set: 9  
t-value for Data Set: 2.306  
2.5% Error Confidence Coefficient (CC) for Data Set: 0.000  
Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 8.33  
Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001  
Bias Test: FAILED  
Bias Adjustment Factor (BAF): 1.091  
Alternative Bias Adjustment Factor (BAF): N/A



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2A  
Test Date: 11/14/03

Run Number	Run Start	Run Stop	Unit Load	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume dry	Run Flag
1	08:04	08:25	174	4.000	3.997	0.003	1
2	08:47	09:08	173	4.000	4.009	-0.009	1
3	09:15	09:36	172	4.020	4.013	0.007	1
4	09:44	10:05	170	4.010	4.013	-0.003	1
5	10:13	10:34	169	4.010	4.015	-0.005	1
6	10:41	11:02	167	4.010	4.020	-0.010	1
7	11:08	11:29	166	4.01	4.020	-0.010	1
8	11:38	11:59	164	4.01	4.020	-0.010	1
9	12:07	12:28	163	4.00	4.018	-0.018	1
Means:			169	4.008	4.014	-0.006	

Standard Deviation of Differences: 0.008  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.006  
 Relative Accuracy (RA): 0.30

**Best Available Copy**



Environmental Services  
Air Services Group

**40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4  
RELATIVE ACCURACY TEST AUDIT**

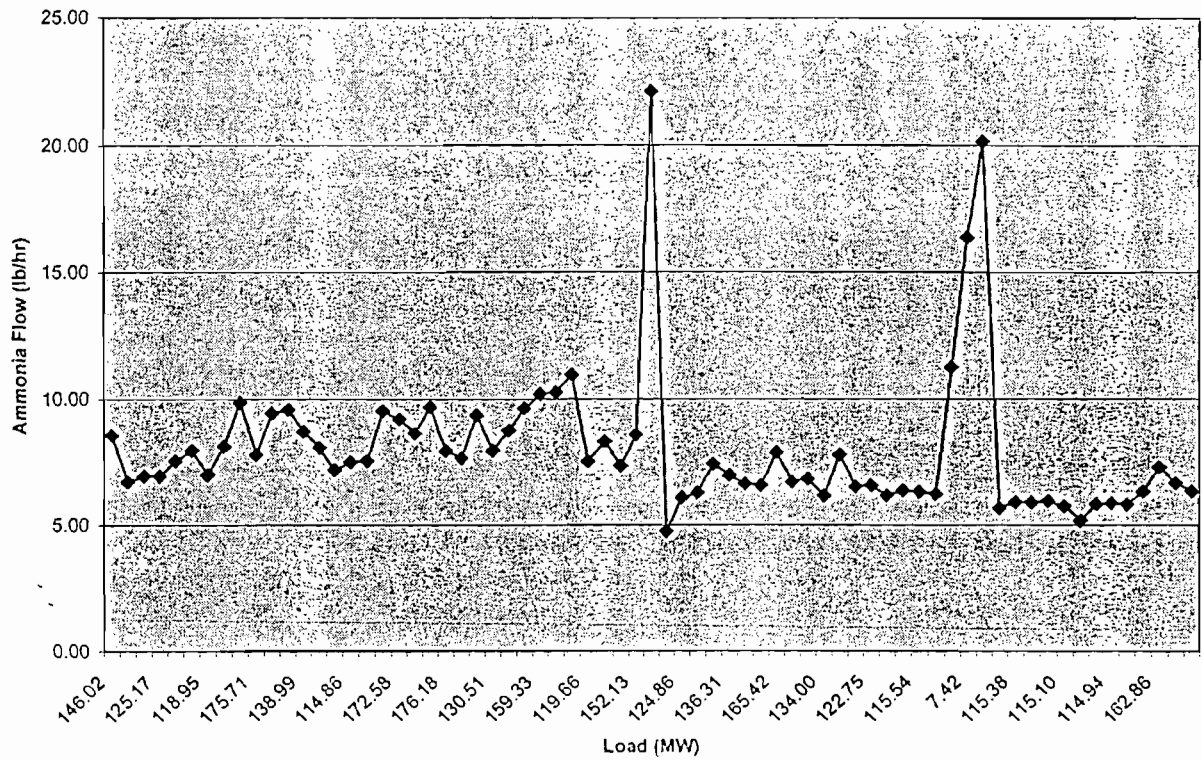
Customer: Tampa Electric Company  
Facility: Dayside Power Station  
Source: CT-2A  
Test Date: 11/14/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference		Run Flag
	Start	Stop		RM -10 CO ppmvd	RM - 3A O <sub>2</sub> %v, dry	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd @ 15% O <sub>2</sub>		
1	08:04	08:25	174	0.92	14.30	0.822	0.70	0.600	0.222	1	
2	08:47	09:08	173	0.90	14.28	0.802	0.70	0.600	0.202	1	
3	09:15	09:36	172	0.84	14.26	0.746	0.70	0.600	0.146	1	
4	09:44	10:05	170	0.86	14.26	0.764	0.70	0.600	0.164	1	
5	10:13	10:34	169	0.88	14.25	0.781	0.70	0.600	0.181	1	
6	10:41	11:02	167	0.86	14.26	0.764	0.70	0.600	0.164	1	
7	11:08	11:29	166	0.85	14.27	0.756	0.70	0.600	0.156	1	
8	11:38	11:59	164	0.86	14.25	0.763	0.69	0.590	0.173	1	
9	12:07	12:28	163	0.91	14.26	0.809	0.64	0.538	0.271	1	
Means: 169						0.779		0.592	0.187		

Standard Deviation of Differences: 0.039  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.030  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 27.85 %  
 Relative Accuracy (RA), Calculated Against Applicable Standard: 2.78 %

Unit 2A Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**Best Available Copy**

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 10/01/03 to 12/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer  
and Model No.:

Thermal Environmental 42CLS

Process Unit  
Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 2B)

Date of Latest CMS  
Certification or Audit

December 2003

Total source operating  
time in reporting period<sup>1</sup>:

79

Emission Data Summary <sup>1</sup>		CMS Performance Summary <sup>2</sup>	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/Shutdown	<u>5</u>	a. Monitor equipment malfunctions	<u>0</u>
b. Control equipment problems	<u>0</u>	b. Non-Monitor equipment malfunctions	<u>0</u>
c. Process problems	<u>0</u>	c. Quality assurance calibration	<u>0</u>
d. Other known causes	<u>0</u>	d. Other known causes	<u>0</u>
e. Unknown causes	<u>0</u>	e. Unknown causes	<u>0</u>
2. Total duration of excess emission	<u>5</u>	2. Total CMS Downtime	<u>0</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time	<u>6 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time	<u>0 %</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

BAYSIDE POWER STATION - CT 2B  
24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	1.2	3.0
12/21/2003	1.3	3.0
12/22/2003	1.1	3.0
12/23/2003	1.2	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



BAYSIDE POWER STATION - CT 2B  
EXCLUDED DATA - QUARTER 4, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
12/21/2003	1100	19.8	832.9	Shutdown
12/22/2003	0300	*	8.4	Start-up
	0400	57.6	583.9	Start-up
	0500	69.8	302.6	Start-up
	0600	33	118.1	Start-up
12/23/2003	2200	37.6	765.1	Shutdown

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

BAYSIDE POWER STATION - CT 2B  
MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2B  
MONITOR DOWNTIME - QUARTER 2, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability	100%
----------------------	------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2B  
Test Date: 12/16/03

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor	Difference lbs/mmbtu	Run Flag
	Start	Stop		RM - 7E NO <sub>x</sub> ppmvd	RM - 3A O <sub>2</sub> %v, dry	RM - 19 NO <sub>x</sub> lbs/mmBtu	RM - 19 NO <sub>x</sub> lbs/mmBtu		
1	09:31	09:52	166	3.48	13.87	0.011	0.011	0.000	1
2	10:31	10:52	164	3.42	13.86	0.011	0.011	0.000	1
3	11:08	11:29	163	3.42	13.85	0.011	0.011	0.000	1
4	11:45	12:06	161	3.42	13.85	0.011	0.011	0.000	1
5	12:20	12:41	161	3.36	13.84	0.010	0.011	-0.001	1
6	12:53	13:14	160	3.30	13.84	0.010	0.011	-0.001	1
7	13:29	13:50	161	3.32	13.80	0.010	0.011	-0.001	1
8	14:07	14:28	161	3.39	13.80	0.010	0.011	-0.001	1
9	14:42	15:03	160	3.42	13.81	0.010	0.011	-0.001	1
Means:			162	0.010			0.011	-0.001	

Standard Deviation of Differences: 0.001  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.000  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 9.20  
 Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001  
 Bias Test: PASSED  
 Bias Adjustment Factor (BAF): 1.000



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2B  
Test Date: 12/16/03

Run Number	Run Times Start	Run Times Stop	Unit Load	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume dry	Run Flag
1	09:31	09:52	166	4.080	3.814	0.266	1
2	10:31	10:52	164	4.080	3.832	0.248	1
3	11:08	11:29	163	4.090	3.848	0.242	1
4	11:45	12:06	161	4.080	3.851	0.229	1
5	12:20	12:41	161	4.100	3.839	0.261	1
6	12:53	13:14	160	4.080	3.818	0.262	1
7	13:29	13:50	161	4.070	3.820	0.250	1
8	14:07	14:28	161	4.040	3.820	0.220	1
9	14:42	15:03	160	4.040	3.820	0.220	1
Means:			162	4.073	3.829	0.244	

Standard Deviation of Differences: 0.018  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.014  
 Relative Accuracy (RA): 6.33



Environmental Services  
Air Services Group

40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4  
RELATIVE ACCURACY TEST AUDIT

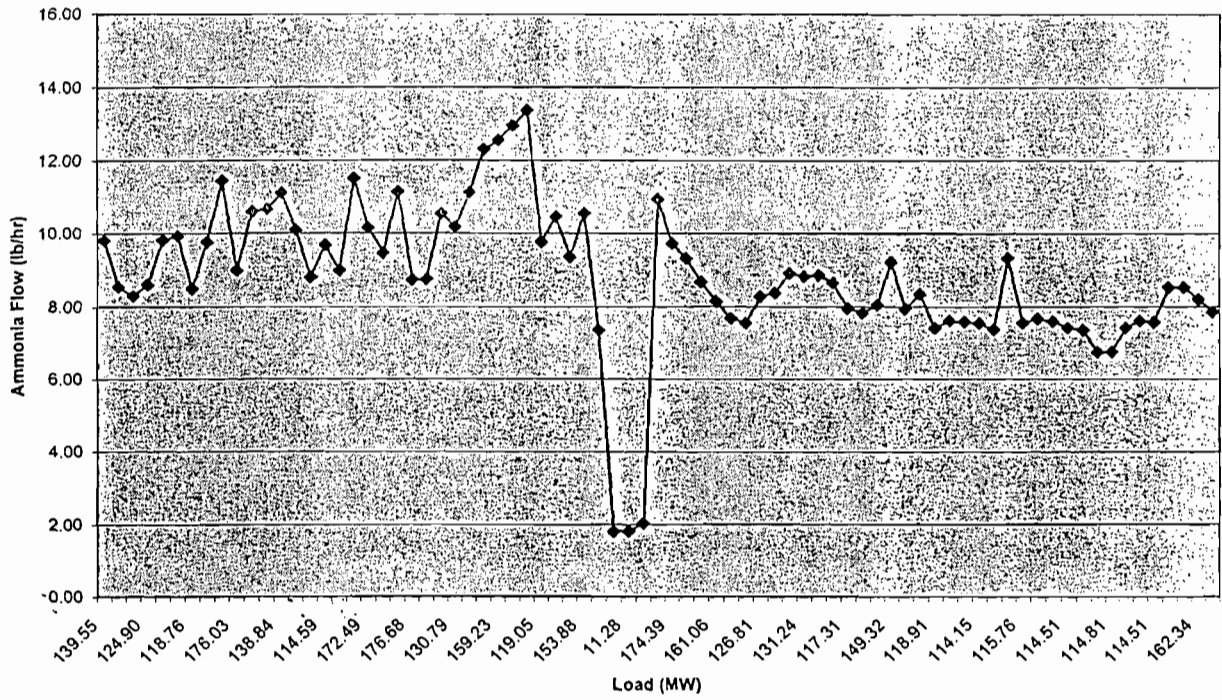
Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2B  
Test Date: 12/16/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference		Run Flag
	Start	Stop		RM -10 CO ppmvd	RM - 3A O <sub>2</sub> %v, dry	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd @ 15% O <sub>2</sub>		
1	09:31	09:52	166	1.05	13.87	0.881	1.32	1.165	-0.284	1	
2	10:31	10:52	164	1.14	13.86	0.955	1.41	1.214	-0.259	1	
3	11:08	11:29	163	0.93	13.85	0.778	1.18	1.055	-0.277	1	
4	11:45	12:06	161	1.11	13.85	0.929	1.36	1.159	-0.230	1	
5	12:20	12:41	161	1.27	13.84	1.061	1.54	1.332	-0.271	1	
6	12:53	13:14	160	1.18	13.84	0.986	1.51	1.300	-0.314	1	
7	13:29	13:50	161	1.12	13.80	0.931	1.48	1.283	-0.352	1	
8	14:07	14:28	161	1.03	13.80	0.856	1.40	1.209	-0.353	1	
9	14:42	15:03	160	0.90	13.81	0.749	1.30	1.100	-0.351	1	
Means:			162			0.903		1.202	-0.299		

Standard Deviation of Differences: 0.045  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.035  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 36.98 %  
 Relative Accuracy (RA), Calculated Against Applicable Standard: 4.28 %

Unit 2S Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 10/01/03 to 12/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer and Model No.: Thermal Environmental 42CLS

Process Unit Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 2C)

Date of Latest CMS Certification or Audit December 2003

Total source operating time in reporting period<sup>1</sup>: 82

Emission Data Summary <sup>1</sup>	CMS Performance Summary <sup>2</sup>
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/Shutdown <u>8</u>	a. Monitor equipment malfunctions <u>4</u>
b. Control equipment problems <u>0</u>	b. Non-Monitor equipment malfunctions <u>0</u>
c. Process problems <u>0</u>	c. Quality assurance calibration <u>0</u>
d. Other known causes <u>0</u>	d. Other known causes <u>0</u>
e. Unknown causes <u>0</u>	e. Unknown causes <u>0</u>
2. Total duration of excess emission <u>8</u>	2. Total CMS Downtime <u>4</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time <u>10 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time <u>5 %</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*



BAYSIDE POWER STATION - CT 2C  
24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO	24-hour block NOx
12/20/2003	0.9	3.0
12/21/2003	1.0	3.0
12/22/2003	0.9	3.0
12/23/2003	1.0	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

**BAYSIDE POWER STATION - CT 2C**  
**EXCLUDED DATA - QUARTER 4, 2003**

<b>Date</b>	<b>Hours Data Excluded</b>	<b>NOx Value of Excluded Data</b>	<b>CO Value of Excluded Data</b>	<b>Reason for Exclusion</b>
12/21/2003	1200	18.3	259.2	Shutdown
	0200	44.2	302.7	Cold Steam Turbine Start-up
	0300	66.9	172.2	Cold Steam Turbine Start-up
	0400	60.3	*	Cold Steam Turbine Start-up
	0700	54.3	*	Cold Steam Turbine Start-up
	0800	55	*	Cold Steam Turbine Start-up
	0900	18.1	*	Cold Steam Turbine Start-up
12/23/2003	2400	14.4	252.9	Shutdown

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2C  
MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2C  
MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime
12/22/2003	4	CO Monitor Problems

Monitor availability:	95%
-----------------------	-----

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2C  
Test Date: 12/20/03

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor	Difference lbs/mmbtu	Run Flag
	Start	Stop		RM - 7E NO <sub>x</sub> ppmvd	RM - 3A O <sub>2</sub> %v, dry	RM - 19 NO <sub>x</sub> lbs/mmBtu	RM - 19 NO <sub>x</sub> lbs/mmBtu		
1	10:51	11:12	176	3.69	14.01	0.012	0.011	0.001	1
2	11:30	11:51	176	3.70	14.03	0.012	0.011	0.001	1
3	12:05	12:26	175	3.66	14.02	0.012	0.011	0.001	1
4	12:44	13:05	175	3.64	14.00	0.011	0.011	0.000	1
5	13:24	13:45	174	3.65	13.94	0.011	0.011	0.000	1
6	13:55	14:16	174	3.63	13.89	0.011	0.011	0.000	1
7	14:26	14:47	174	3.63	13.92	0.011	0.011	0.000	1
8	14:57	15:18	174	3.64	13.96	0.011	0.011	0.000	1
9	15:28	15:49	174	3.63	13.96	0.011	0.011	0.000	1

Means: 175

0.011

0.011

0.000

Standard Deviation of Differences: 0.001  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.000  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 6.33  
 Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.000  
 Bias Test: PASSED  
 Bias Adjustment Factor (BAF): 1.000  
 Alternative Bias Adjustment Factor (BAF): N/A



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2C  
Test Date: 12/20/03

Run Number	Run Times Start	Run Times Stop	Unit Load	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume dry	Run Flag
1	10:51	11:12	176	4.090	3.999	0.091	1
2	11:30	11:51	176	4.080	4.000	0.080	1
3	12:05	12:26	175	4.080	4.010	0.070	1
4	12:44	13:05	175	4.080	4.007	0.073	1
5	13:24	13:45	174	4.090	4.010	0.080	1
6	13:55	14:16	174	4.090	4.019	0.071	1
7	14:26	14:47	174	4.090	4.020	0.070	1
8	14:57	15:18	174	4.090	4.022	0.068	1
9	15:28	15:49	174	4.090	4.020	0.070	1
Means:			175	4.087	4.012	0.075	

Standard Deviation of Differences: 0.007  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.006  
 Relative Accuracy (RA): 1.97



Environmental Services  
Air Services Group

40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4  
RELATIVE ACCURACY TEST AUDIT

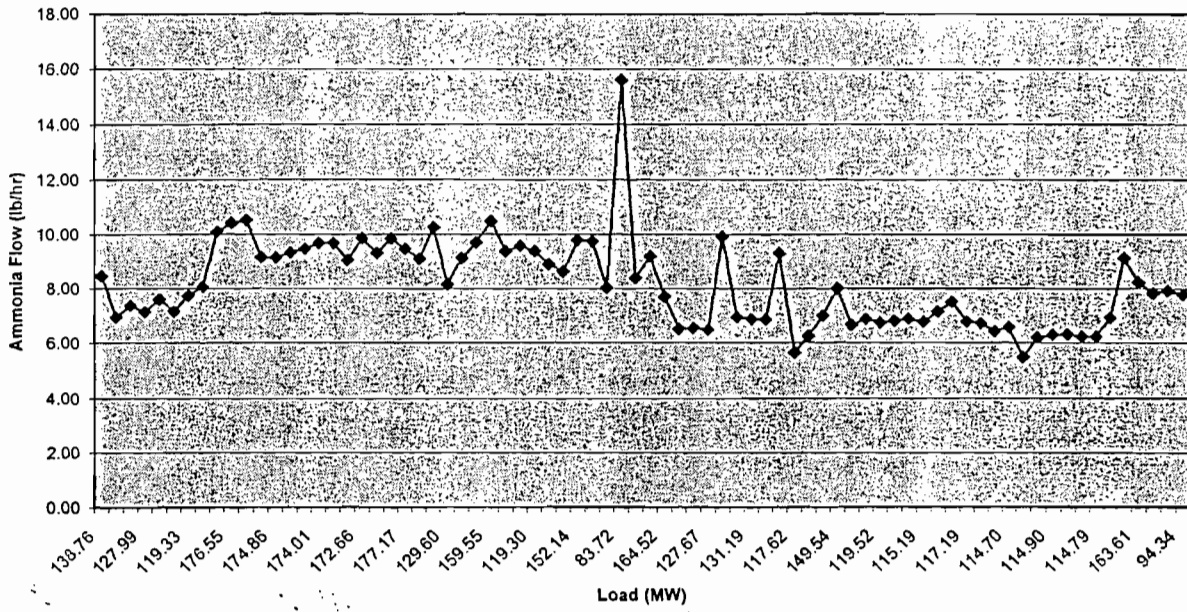
Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2C  
Test Date: 12/20/03

Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference CO ppmvd @ 15% O <sub>2</sub>	Run Flag
	Start	Stop		RM -10 CO ppmvd	RM - 3A O <sub>2</sub> %v, dry	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd	CO ppmvd @ 15% O <sub>2</sub>		
1	10:51	11:12	176	0.94	14.01	0.805	0.90	0.800	0.005	1
2	11:30	11:51	176	0.96	14.03	0.824	0.90	0.800	0.024	1
3	12:05	12:26	175	0.87	14.02	0.746	0.90	0.800	-0.054	1
4	12:44	13:05	175	0.77	14.00	0.658	0.90	0.800	-0.142	1
5	13:24	13:45	174	0.69	13.94	0.585	0.89	0.791	-0.206	1
6	13:55	14:16	174	0.70	13.89	0.589	0.89	0.791	-0.202	1
7	14:26	14:47	174	0.70	13.92	0.592	0.89	0.786	-0.194	1
8	14:57	15:18	174	0.73	13.96	0.621	0.85	0.755	-0.134	1
9	15:28	15:49	174	0.77	13.96	0.655	0.81	0.712	-0.057	1
Means: 175						0.675		0.782	-0.107	

Standard Deviation of Differences: 0.089  
Number of Valid Runs Included in Data Set: 9  
t-value for Data Set: 2.306  
2.5% Error Confidence Coefficient (CC) for Data Set: 0.068  
Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 25.94 %  
Relative Accuracy (RA), Calculated Against Applicable Standard: 2.24 %

Unit 2C Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24



**SUMMARY REPORT – NO<sub>x</sub> EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE  
NSPS SUBPART GG**

Pollutant: NO<sub>x</sub> - Combustion Turbine

Emission Limitation: 3.5 ppmvd @ 15% O<sub>2</sub> on a 24-hour block average

Reporting period dates: From 10/01/03 to 12/31/03

Company: Tampa Electric Company  
Address: P.O. Box 111  
Tampa, FL 33601-0111

Monitor Manufacturer  
and Model No.:

Thermal Environmental 42CLS

Process Unit  
Description : 169 MW Combined Cycle  
Combustion Turbine  
(CT 2D)

Date of Latest CMS  
Certification or Audit

December 2003

Total source operating  
time in reporting period<sup>1</sup>:

78

Emission Data Summary <sup>1</sup>		CMS Performance Summary <sup>2</sup>	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/Shutdown	<u>4</u>	a. Monitor equipment malfunctions	<u>0</u>
b. Control equipment problems	<u>0</u>	b. Non-Monitor equipment malfunctions	<u>0</u>
c. Process problems	<u>0</u>	c. Quality assurance calibration	<u>0</u>
d. Other known causes	<u>0</u>	d. Other known causes	<u>0</u>
e. Unknown causes	<u>0</u>	e. Unknown causes	<u>0</u>
2. Total duration of excess emission	<u>4</u>	2. Total CMS Downtime	<u>0</u>
3. <u>Total duration of excess emissions x (100)</u> Total source operating time	<u>5 %</u>	3. <u>Total CMS Downtime x (100)</u> Total source operating time	<u>0%</u>

*Note: On a separate page, describe any changes to CMS, process or controls during last 6 months. For each quarter, summarize the ammonia injection rates over various loads and the data excluded due to startups, shutdowns, and malfunctions.*

*This form is used for reporting excess emission according to New Source Performance Standard (NSPS) Subpart GG only. (CO is not a regulated by Subpart GG and is reported under the semi-annual excess emission report required by Section III, permit condition 25.)*

- For gases record all times in hours.
- For the reporting period: if the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

*TEC Note: The summary report form and the excess emission report required will also be submitted in the semi-annual report.*

BAYSIDE POWER STATION - CT 2D  
24 - HOUR BLOCK AVERAGE - QUARTER 4, 2003

Date	24-hour block CO <sub>2</sub>	24-hour block NO <sub>x</sub>
12/20/2003	0.8	3.0
12/21/2003	1.0	3.0
12/22/2003	0.8	3.0
12/23/2003	0.9	3.0
12/24/2003	Offline	Offline
12/25/2003	Offline	Offline
12/26/2003	Offline	Offline
12/27/2003	Offline	Offline
12/28/2003	Offline	Offline
12/29/2003	Offline	Offline
12/30/2003	Offline	Offline
12/31/2003	Offline	Offline

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2D  
EXCLUDED DATA - QUARTER 4, 2003

Date	Hours Data Excluded	NOx Value of Excluded Data	CO Value of Excluded Data	Reason for Exclusion
12/21/2003	1200	55.2	594.8	Shutdown
12/22/2003	0800	50.9	458	Start-up
	0900	38.3	341.3	Start-up
12/24/2003	2400	5.7	41.5	Shutdown

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

\* Data not excluded.

BAYSIDE POWER STATION - CT 2D  
MAINTENANCE/REPAIR OF CEMS - QUARTER 4, 2003

Date	Unusual Maint. Or Repair of CEMS
	No Unusual Maintenance of CEMS

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25

BAYSIDE POWER STATION - CT 2D  
MONITOR DOWNTIME - QUARTER 4, 2003

Date	Hours of Missing Data for Monitor Downtime	Reason for Monitor Downtime

Monitor availability:	100%
-----------------------	------

Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 25



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2D  
Test Date: 12/17/03

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference lbs/mmbtu	Run Flag
	Start	Stop		RM - 7E NO <sub>x</sub> ppmvd	RM - 3A O <sub>2</sub> %v, dry	RM - 19 NO <sub>x</sub> lbs/mmBtu	RM - 19 NO <sub>x</sub> lbs/mmBtu			
1	09:32	09:53	172	3.74	13.84	0.012	0.011	0.001	1	
2	10:46	11:07	173	3.81	13.83	0.012	0.011	0.001	1	
3	11:23	11:44	173	3.73	13.85	0.011	0.011	0.000	1	
4	11:55	12:16	172	3.76	13.85	0.012	0.011	0.001	1	
5	12:31	12:52	172	3.76	13.84	0.012	0.011	0.001	1	
6	13:05	13:26	173	3.81	13.87	0.012	0.011	0.001	1	
7	13:42	14:03	173	3.87	13.89	0.012	0.011	0.001	1	
8	14:15	14:36	173	3.90	13.89	0.012	0.011	0.001	1	
9	14:48	15:09	173	3.95	13.88	0.012	0.011	0.001	1	
Means:			173			0.012	0.011	0.001		

Standard Deviation of Differences: 0.000  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.000  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 9.63  
 Relative Accuracy (RA), Calculated As Mean Difference, Alternative Performance Specification (APS): 0.001  
 Bias Test: FAILED  
 Bias Adjustment Factor (BAF): 1.081  
 Alternative Bias Adjustment Factor (BAF): N/A



Environmental Services  
Air Services Group

40CFR75 - APPENDIX A  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2D  
Test Date: 12/17/03

Run Number	Run Times Start	Run Times Stop	Unit Load	Air Services Group - Test Data RM - 3A CO <sub>2</sub> , % volume dry	Continuous Emissions Monitor CO <sub>2</sub> , % volume dry	Difference CO <sub>2</sub> , % volume dry	Run Flag
1	09:32	09:53	172	4.150	4.084	0.066	1
2	10:46	11:07	173	4.140	4.080	0.060	1
3	11:23	11:44	173	4.110	4.071	0.039	1
4	11:55	12:16	172	4.090	4.075	0.015	1
5	12:31	12:52	172	4.090	4.071	0.019	1
6	13:05	13:26	173	4.090	4.089	0.001	1
7	13:42	14:03	173	4.100	4.119	-0.019	1
8	14:15	14:36	173	4.100	4.140	-0.040	1
9	14:48	15:09	173	4.100	4.146	-0.046	1

Means: 173                      4.108                      4.097                      0.011

Standard Deviation of Differences: 0.041  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.031  
 Relative Accuracy (RA): 1.02



Environmental Services  
Air Services Group

40CFR60 - APPENDIX B, PERFORMANCE SPECIFICATION 4  
RELATIVE ACCURACY TEST AUDIT

Customer: Tampa Electric Company  
Facility: Bayside Power Station  
Source: CT-2D  
Test Date: 12/17/03

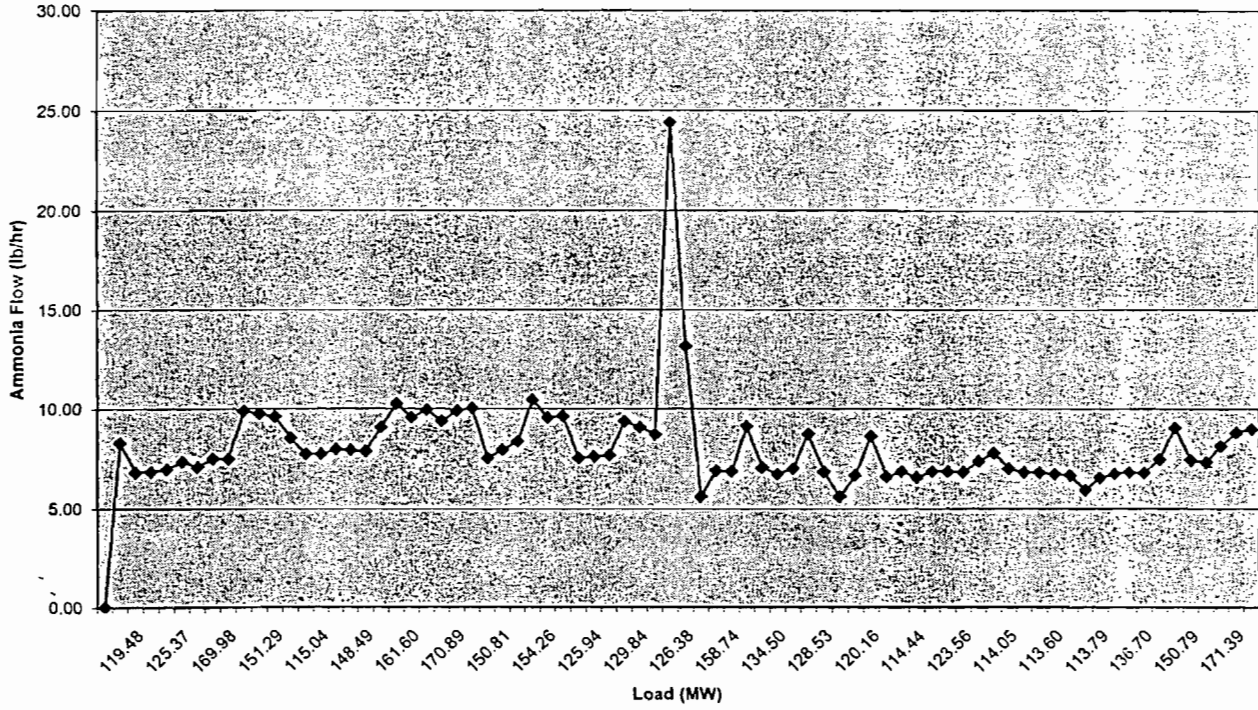
Applicable Standard: 7.8 ppmvd CO @ 15% O<sub>2</sub>

Run Number	Run Times		Unit Load	Air Services Group - Test Data			Continuous Emissions Monitor		Difference CO ppmvd @ 15% O <sub>2</sub>	Run Flag
	Start	Stop		RM -10 CO ppmvd	RM - 3A O <sub>2</sub> %v, dry	CO ppmvd @ 15% O <sub>2</sub>	CO ppmvd	CO ppmvd @ 15% O <sub>2</sub>		
1	09:32	09:53	172	0.87	13.84	0.727	0.95	0.781	-0.054	1
2	10:46	11:07	173	0.82	13.83	0.684	0.96	0.773	-0.089	1
3	11:23	11:44	173	0.87	13.85	0.728	0.96	0.777	-0.049	1
4	11:55	12:16	172	0.83	13.85	0.695	0.98	0.786	-0.091	1
5	12:31	12:52	172	0.96	13.84	0.802	0.96	0.764	0.038	1
6	13:05	13:26	173	0.99	13.87	0.831	0.90	0.709	0.122	1
7	13:42	14:03	173	0.93	13.89	0.783	0.85	0.700	0.083	1
8	14:15	14:36	173	0.93	13.89	0.783	0.80	0.686	0.097	1
9	14:48	15:09	173	0.96	13.88	0.807	0.80	0.627	0.180	1
Means: 173						0.760		0.734	0.026	

Standard Deviation of Differences: 0.100  
 Number of Valid Runs Included in Data Set: 9  
 t-value for Data Set: 2.306  
 2.5% Error Confidence Coefficient (CC) for Data Set: 0.077  
 Relative Accuracy (RA), Calculated Against Mean Reference Method Value: 13.60 %  
 Relative Accuracy (RA), Calculated Against Applicable Standard: 1.32 %



Unit 2D Load vs Ammonia Flow



Per Air Permit No. 0570040-015-AC, Section III, Specific Condition 24

# **Attachment 5**



40 CFR 60  
APPENDIX F  
DATA ASSESSMENT REPORT

Period Ending Date: December 31, Year: 2003  
Company Name: Tampa Electric Company  
Plant Name: Bayside Power Station Source ORIS Code 7873  
Source Common Name: Unit 1 EU No.: 020, 021, 022

CEMS Information

CT-1A CT-1B CT-1C  
CO Manufacturer: Thermo Environmental  
CO Model Number: 48C  
CO Serial Number: 48C-73684-374 48C-73423-373 48C-73685-374  
CO Span Value: Dual Range 0-20/0-1000 ppmv

CO<sub>2</sub> Manufacturer: Siemens  
CO<sub>2</sub> Model Number: Ultramat - 6  
CO<sub>2</sub> Serial Number N1-ND-0876 N1-ND-0870 N1-ND-0877  
CO<sub>2</sub> Span Value: 0 - 10% volume

Note: Cylinder Gas Audit Relative Accuracy (RA) calculated as:  
 $A = ((C_m - C_a) / C_a) \times 100$

Where:

C<sub>m</sub> = Average of CEMS response during audit in units of applicable standard or appropriate concentration.  
C<sub>a</sub> = Average audit value (CGA certified value or three-run average for RAA) in units of applicable standard or appropriate concentration.

Appendix F, Equation 1-1

Additionally, low range analyzers that fail to meet the  $\pm 15\%$  are subject to a  $\pm 5$  ppm "criteria for excessive audit inaccuracy" as specified in Appendix F, 5.2.3 and calculated as:

$$C_m - C_a$$

**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO in ppm.

**CT-1A**

**Low-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 066579		AAL - 955
Certification Date:	07/28/2003		09/14/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	5.17	ppm	11.10
CEMs Response:	5.300	ppm	11.367
RA ( $\pm$ 15%):	2.51	%	2.41
RA ( $\pm$ 5 ppm):	N/A	ppm	N/A

**High-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 050741		ALM - 032306
Certification Date:	01/31/2003		09/09/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	244.0	ppm	545.0
CEMs Response:	248.600	ppm	544.667
Accuracy:	2.30	%	-0.06

**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO in ppm.

**CT-1B**

**Low-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	ALM - 066579		AAL - 19084
Certification Date:	07/28/2003		08/03/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	5.17	ppm	11.40
CEMs Response:	6.067	ppm	11.900
RA ( $\pm$ 15%):	17.35	%	4.39
RA ( $\pm$ 5 ppm):	0.90	ppm	N/A

**High-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	AAL - 18340		ALM - 046642
Certification Date:	02/20/2003		07/21/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	254.0	ppm	554.0
CEMs Response:	261.400	ppm	526.800
Accuracy:	2.91	%	-4.91

**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO in ppm.

**CT-1C**

**Low-range**

	Audit Point #1		Audit Point #2
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	ALM - 066579		AAL - 19084
Certification Date:	07/28/2003		08/03/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	5.17	ppm	11.40
CEMs Response:	5.667	ppm	11.267
RA (+ 15%):	9.61	%	-1.17
RA (+ 5 ppm):	N/A	ppm	N/A

**High-range**

	Audit Point #1		Audit Point #2
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	AAL - 18340		ALM - 046642
Certification Date:	02/20/2003		07/21/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	254.0	ppm	554.0
CEMs Response:	274.667	ppm	566.500
Accuracy:	8.14	%	2.26

**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.

**CT-1A**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	10/18/2003		10/18/2003
Cylinder ID Number:	ALM - 045675		ALM - 046413
Certification Date:	02/04/2003		08/29/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.06	%, v/v	5.51
CEMs Response:	2.067	%, v/v	5.500
Accuracy:	0.34	%	-0.18

**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.

**CT-1B**

	Audit Point #1		Audit Point #2
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	ALM - 045052		ALM - 039271
Certification Date:	02/20/2003		08/27/2002
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.53	%, v/v	5.46
CEMs Response:	2.600	%, v/v	5.433
Accuracy:	2.77	%	-0.49



**1. Accuracy Assessment Results - Quarter 4, 2003**

B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.

**CT-1C**

	Audit Point #1		Audit Point #2
Audit Date:	10/27/2003		10/27/2003
Cylinder ID Number:	ALM - 045052		ALM - 039271
Certification Date:	02/20/2003		08/27/2002
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.53	%, v/v	5.46
CEMs Response:	2.500	%, v/v	5.300
Accuracy:	-1.19	%	-2.93

**2. Calibration Drift Assessment.**

**A. Out-of-control periods.**

1. Date(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Number of days: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B. Corrective Action Taken.**



Environmental Services  
Air Services Group

40 CFR 60  
APPENDIX F  
DATA ASSESSMENT REPORT

Period Ending Date: December 31, Year: 2003  
Company Name: Tampa Electric Company  
Plant Name: Bayside Power Station Source ORIS Code 7873  
Source Common Name: Unit 2 EU No.: 023, 024, 025, 026

CEMS Information

	CT-2A	CT-2B	CT-2C	CT-2D
CO Manufacturer:	Thermo Environmental			
CO Model Number:	48C			
CO Serial Number:	48C-74345-376	48C-74342-376	48C-74343-376	48C-73683-374
CO Span Value:	Dual Range 0-20/0-1000 ppmv			
CO <sub>2</sub> Manufacturer:	Siemens			
CO <sub>2</sub> Model Number:	Ultramat - 6			
CO <sub>2</sub> Serial Number	N1-ND-0892	N1-ND-0897	N1-ND-0984	N1-ND-0893
CO <sub>2</sub> Span Value:	0 - 10% volume			

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO in ppm.**

	<u>CT - 2A</u>		
Audit Date:	11/14/2003		
Reference Method(s) Employed:	10/3a		
Average Reference Method Value:	0.779	ppmvd @ 15% O <sub>2</sub>	
Average CEM Value:	0.592	ppmvd @ 15% O <sub>2</sub>	
Absolute Value of Mean Difference:	0.187	ppmvd @ 15% O <sub>2</sub>	
Confidence Coefficient:	0.030	ppmvd @ 15% O <sub>2</sub>	
Percent Relative Accuracy (mean of reference methods):		27.9	%
Percent Relative Accuracy (applicable standard):		2.78	%

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO in ppm.**

	<u>CT - 2B</u>	
Audit Date:	11/12/2003	
Reference Method(s) Employed:	10/3a	
Average Reference Method Value:	0.717	ppmvd @ 15% O <sub>2</sub>
Average CEM Value:	0.630	ppmvd @ 15% O <sub>2</sub>
Absolute Value of Mean Difference:	0.087	ppmvd @ 15% O <sub>2</sub>
Confidence Coefficient:	0.013	ppmvd @ 15% O <sub>2</sub>
Percent Relative Accuracy (mean of reference methods):	14.07	%
Percent Relative Accuracy (applicable standard):	1.29	%

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO in ppm.**

	<u>CT - 2C</u>	
Audit Date:	12/20/2003	
Reference Method(s) Employed:	10/3a	
Average Reference Method Value:	0.675	ppmvd @ 15% O <sub>2</sub>
Average CEM Value:	0.782	ppmvd @ 15% O <sub>2</sub>
Absolute Value of Mean Difference:	0.107	ppmvd @ 15% O <sub>2</sub>
Confidence Coefficient:	0.068	ppmvd @ 15% O <sub>2</sub>
Percent Relative Accuracy (mean of reference methods):	25.9	%
Percent Relative Accuracy (applicable standard):	2.24	%

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO in ppm.**

	<u>CT - 2D</u>	
Audit Date:	12/17/2003	
Reference Method(s) Employed:	10/3a	
Average Reference Method Value:	0.760	ppmvd @ 15% O <sub>2</sub>
Average CEM Value:	0.734	ppmvd @ 15% O <sub>2</sub>
Absolute Value of Mean Difference:	0.026	ppmvd @ 15% O <sub>2</sub>
Confidence Coefficient:	0.077	ppmvd @ 15% O <sub>2</sub>
Percent Relative Accuracy (mean of reference methods):	13.6	%
Percent Relative Accuracy (applicable standard):	1.32	%

The applicable standard for this unit is 7.8 ppmvd @ 15% O<sub>2</sub>.

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.**

	<u>CT - 2A</u>	
Audit Date:	11/14/2003	
Reference Method(s) Employed:	3A	
Average Reference Method Value:	4.008	% volume
Average CEM Value:	4.014	% volume
Absolute Value of Mean Difference:	0.006	% volume
Confidence Coefficient:	0.006	% volume
Percent Relative Accuracy (mean of reference methods):		0.30 %
Percent Relative Accuracy (absolute difference):		0.01 % volume



**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.**

	<u>CT - 2B</u>	
Audit Date:	11/12/2003	
Reference Method(s) Employed:	3A	
Average Reference Method Value:	4.060	% volume
Average CEM Value:	3.969	% volume
Absolute Value of Mean Difference:	0.090	% volume
Confidence Coefficient:	0.025	% volume
Percent Relative Accuracy (mean of reference methods):		2.83 %
Percent Relative Accuracy (absolute difference):		0.09 % volume

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.**

Audit Date:	<u>CT - 2C</u> 12/20/2003	
Reference Method(s) Employed:	3A	
Average Reference Method Value:	4.087	% volume
Average CEM Value:	4.012	% volume
Absolute Value of Mean Difference:	0.075	% volume
Confidence Coefficient:	0.006	% volume
Percent Relative Accuracy (mean of reference methods):		1.98 %
Percent Relative Accuracy (absolute difference):		0.08 % volume

**1. Accuracy Assessment Results**

**A. Relative Accuracy Test Audit(s) for CO<sub>2</sub> in % volume.**

	<u>CT - 2D</u>		
Audit Date:	12/17/2003		
Reference Method(s) Employed:	3A		
Average Reference Method Value:	4.108	% volume	
Average CEM Value:	4.097	% volume	
Absolute Value of Mean Difference:	0.011	% volume	
Confidence Coefficient:	0.031	% volume	
Percent Relative Accuracy (mean of reference methods):			1.02 %
Percent Relative Accuracy (absolute difference):			0.01 % volume

**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO in ppm.**

**CT-2A**

**Low-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/07/2003		10/07/2003
Cylinder ID Number:	ALM - 066579		AAL - 18045
Certification Date:	07/28/2003		09/01/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	5.17	ppm	11.00
CEMs Response:	5.100	ppm	11.000
Accuracy:	-1.35	%	0.00

**High-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	10/07/2003		10/07/2003
Cylinder ID Number:	ALM - 034825		ALM - 064853
Certification Date:	09/01/2003		08/31/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	249.0	ppm	542.0
CEMs Response:	247.300	ppm	540.767
Accuracy:	-0.68	%	-0.23

**1. Accuracy Assessment Results Quarter 4, 2003**

B. Cylinder Gas Audit for CO in ppm.

**CT-2B**

**Low-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	09/05/2003		09/05/2003
Cylinder ID Number:	ALM -045402		AAL - 18045
Certification Date:	03/02/2002		AAL - 18045
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	5.08	ppm	11.00
CEMs Response:	5.067	ppm	10.967
Accuracy:	-0.26	%	-0.30

**High-range**

	Audit <u>Point #1</u>		Audit <u>Point #2</u>
Audit Date:	09/05/2003		09/05/2003
Cylinder ID Number:	ALM - 034825		ALM - 064853
Certification Date:	09/01/2003		08/31/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	249.0	ppm	542.0
CEMs Response:	250.733	ppm	539.867
Accuracy:	0.70	%	-0.39

**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO in ppm.**

**CT-2C**

**Low-range**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	11/18/2003		11/18/2003
Cylinder ID Number:	ALM - 005846		IL - 1617
Certification Date:	02/18/2002		02/02/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	6.07	ppm	11.30
CEMs Response:	6.000	ppm	11.367
Accuracy:	-1.15	%	0.59

**High-range**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	11/18/2003		11/18/2003
Cylinder ID Number:	ALM - 034825		ALM - 054618
Certification Date:	09/01/2003		10/13/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	243.0	ppm	553.0
CEMs Response:	246.967	ppm	548.733
Accuracy:	-0.82	%	-0.77

**1. Accuracy Assessment Results Quarter 4, 2003**

B. Cylinder Gas Audit for CO in ppm.

**CT-2D**

**Low-range**

	Audit Point #1		Audit Point #2
Audit Date:	11/14/2003		11/14/2003
Cylinder ID Number:	ALM - 005846		IL - 1617
Certification Date:	02/18/2002		02/02/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	6.07	ppm	11.30
CEMs Response:	6.000	ppm	11.200
Accuracy:	-1.15	%	-0.88

**High-range**

	Audit Point #1		Audit Point #2
Audit Date:	11/14/2003		11/14/2003
Cylinder ID Number:	ALM - 034825		ALM - 054618
Certification Date:	09/01/2003		10/13/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	249.0	ppm	553.0
CEMs Response:	248.200	ppm	550.300
Accuracy:	-0.32	%	-0.49

**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.**

**CT-2A**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	10/09/2003		10/09/2003
Cylinder ID Number:	ALM - 019353		ALM - 060212
Certification Date:	09/01/2003		08/29/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.5	%, v/v	5.50
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00



**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.**

**CT-2B**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	09/05/2003		09/05/2003
Cylinder ID Number:	ALM - 019353		ALM - 060212
Certification Date:	09/01/2003		08/29/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.500	%, v/v	5.500
Accuracy:	0.00	%	0.00

**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.**

**CT-2C**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	11/18/2003		11/18/2003
Cylinder ID Number:	ALM - 019353		ALM - 035365
Certification Date:	09/01/2003		09/02/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00

**1. Accuracy Assessment Results Quarter 4, 2003**

**B. Cylinder Gas Audit for CO<sub>2</sub> in %v/v.**

**CT-2D**

	<u>Audit Point #1</u>		<u>Audit Point #2</u>
Audit Date:	11/16/2003		11/16/2003
Cylinder ID Number:	ALM - 019353		ALM - 035365
Certification Date:	09/01/2003		09/02/2003
Certification Type:	USEPA Protocol 1, Procedure G1		
Certified Value:	2.5	%, v/v	5.5
CEMs Response:	2.533	%, v/v	5.500
Accuracy:	1.32	%	0.00

**2. Calibration Drift Assessment.**

**A. Out-of-control periods.**

1. Date(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Number of days: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**B. Corrective Action Taken.**