

POLK POWER STATION
TITLE V AIR OPERATION PERMIT
REVISION APPLICATION

Prepared for:



TAMPA ELECTRIC
Tampa, Florida

Prepared by:

ECT

Environmental Consulting & Technology, Inc.
1901 S. Harbor City Boulevard, Suite 600
Melbourne, Florida 32940

ECT No. 010888 - 0300

December 2003

INTRODUCTION

Tampa Electric Company (TEC) operates one combined cycle combustion turbine (Emission Unit ID No. 001), which fires syngas or No.2 fuel oil, and two simple cycle combustion turbines (Emission Units ID Nos. 002 and 003), which fire natural gas or No.2 fuel oil, at its Polk Power Station (PPS) located in Polk County, Florida. In addition to the three combustion turbines, the Polk Power Station emission sources include an auxiliary boiler (Emission Unit ID No. 003), which fires No.2 fuel oil, a sulfuric acid plant (Emission Unit ID No. 004), a solid fuel handling system (Emission Unit ID No. 005), a solid fuel gasification system (Emission Unit ID No. 006), and miscellaneous unregulated/insignificant emission units (Emission Units ID Nos. 007 and 008). This facility currently operates under the authority of FINAL Title V Permit Revision Number 1050233-012-AV. FINAL Permit Number 1050233-012-AV was issued with an effective date of January 1, 2001 and expires on December 31, 2004.

The purpose of this Title V air operation permit revision application is to request changes to several conditions of FINAL Title V Permit Revision No. 1050233-012-AV. The proposed Title V permit condition changes address the SO₂ emissions monitoring strategy for solid fuel operations, overall SO₂ and NO_x emissions monitoring strategy, water to fuel ratio reporting requirements, clarification of testing requirements, clarification of requirements during startup, shutdown, malfunction and low load, and assorted items collectively characterized as permit hygiene to the current Title V Permit. The PPS Unit 1 (i.e., the coal gasification and combustion turbine) is a unique facility, with only a limited number of similar types of operational facilities in the world. During the past seven years, the facility has gained considerable operational experience. TEC requests that FDEP consider this operational experience, which is an essential element of this permit modification request, when considering the individual elements of the requested modification.

This Title V air operation permit revision request is organized by each individual item and discussed in detail on Attachment C of the application. Items 1 through 3 of this request address requirements that are derived from New Source Performance Standard (NSPS) Subpart GG, *Standards of Performance for Stationary Gas Turbines*. NSPS Subpart GG applies to the operation of Unit 1 (i.e., the combined cycle combustion turbine (CT), E.U. ID No. 001), and limits emissions of nitrogen oxides (NO_x) and sulfur dioxide (SO₂). However, the facility has considerably more stringent Best Available Control Technology (BACT) emissions limits for both NO_x and SO₂, and provides monitoring via continuous emissions monitors (CEMs) for both pollutants. For example, in the case of NO_x emissions, the BACT emissions limits are 15 and 42 ppmvd at 15% O₂ for syngas and fuel oil firing, respectively. The NSPS NO_x

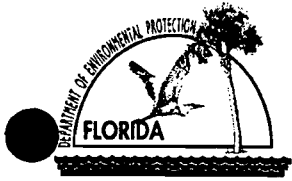
emissions limit is 164 ppmvd at 15% O₂. Because the emissions limits and monitoring procedures associated with the BACT limits are more stringent than those provided by NSPS Subpart GG, TEC requests alternative NSPS Subpart GG monitoring procedures based on practically enforceable permit requirements involving the BACT emission limits. This treatment is consistent with U.S. EPA guidance for streamlining of permits.

Items 4, 5 and 6 address a variety of minor items with the intent of clarifying certain aspects of the permit conditions. For example, the demonstration period has been completed, hence it is appropriate to remove those provisions that addressed the demonstration period.

The Department's *Application for Air Permit - Long Form*, DEP Form No. 62-210.900(1), Effective June 16, 2003, follows this introduction (Attachment A). A Compliance Report and Plan is provided in Attachment B. A detailed discussion of each request permit condition change is provided in Attachment C. A marked-up copy of the current Polk Power Station Title V permit is provided in Attachment D. Attachment E contains correspondence to support the removal of sulfur fuel sampling. An electronic copy of Attachment D has also been provided to the Department via electronic mail.

ATTACHMENT A

APPLICATION FOR AIR PERMIT - LONG FORM



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

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

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

Air Operation Permit – Use this form to apply for:

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

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

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Tampa Electric Company.	
2. Site Name: Polk Power Station	
3. Facility Identification Number: 1050233	
4. Facility Location... Street Address or Other Locator: 9995 State Route 37 South City: Mulberry County: Polk Zip Code: 33860-0775	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Raiza Calderon	
2. Application Contact Mailing Address... Organization/Firm: Tampa Electric Company, Environmental Affairs Street Address: 6944 US HWY 41 North City: Apollo Beach State: Florida Zip Code: 33572-9200	
3. Application Contact Telephone Numbers... Telephone: (813) 641- 5261 ext. Fax: (813) 641 - 5081	
4. Application Contact Email Address: <u>rcalderon@tecoenergy.com</u>	

Application Processing Information (DEP Use)

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

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

Air construction permit.

Air Operation Permit

Initial Title V air operation permit.

Title V air operation permit revision.

Title V air operation permit renewal.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

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

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

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

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

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

Application Comment

Please refer to the enclosed documentation (request) for a discussion of the requested changes to the facility's Title V Operating Permit.

APPLICATION INFORMATION

Owner/Authorized Representative Statement

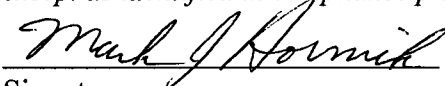
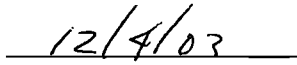
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: () - ext. Fax: () -
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i> _____ Signature _____ Date

APPLICATION INFORMATION

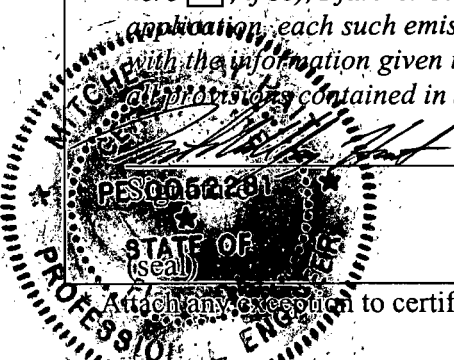
Application Responsible Official Certification

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

1. Application Responsible Official Name: Mark J. Hornick., General Manager
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: Florida Zip Code: 33601-0111
4. Application Responsible Official Telephone Numbers... Telephone: (813) 228 - 1111 ext. 39988 Fax: (863) 428 - 5927
5. Application Responsible Official Email Address: <u>mjhornick@tecoenergy.com</u>
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  Signature  Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Mitchell Jay Hait Registration Number: 0052281
2. Professional Engineer Mailing Address... Organization/Firm: Environmental Consulting & Technology Street Address: 1901 S. Harbor City Blvd., Suite 600 City: Melbourne State: Florida Zip Code: 32901
3. Professional Engineer Telephone Numbers... Telephone: (321) 733 - 1333 ext. 605 Fax: (321) 733 - 1303
4. Professional Engineer Email Address: <u>mhait@ectinc.com</u>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> ; if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  _____ December 4, 2003 Date

Attach any exceptions to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 402.45 North (km) 3,067.35		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 27/43/43 Longitude (DD/MM/SS) 81/59/23	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Mike Perkins – Environmental Coordinator
2. Facility Contact Mailing Address... Organization/Firm: Tampa Electric Company Street Address: P.O. Box 111 City: Tampa State: Florida Zip Code: 33601-0111
3. Facility Contact Telephone Numbers: Telephone: (813) 228-1111 ext. 39109 Fax: (863) 428 - 5927
4. Facility Contact Email Address: <u>msperkins@tecoenergy.com</u>

Facility Primary Responsible Official

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

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

FACILITY INFORMATION

Facility Regulatory Classifications

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

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

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
NO _x	A	N
SO ₂	A	N
CO	A	N
PM ₁₀	A	N
PM	A	N
SAM	A	N
VOC	A	N
PB	A	N

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>2000</u>
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>2000</u>
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>2000</u>

Additional Requirements for Air Construction Permit Applications N/A

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

ATTACHMENT B

COMPLIANCE REPORT AND PLAN

**TAMPA ELECTRIC COMPANY
POLK POWER STATION**

**COMPLIANCE REPORT, PLAN,
AND CERTIFICATION**

1. Compliance Report and Plan

Appendix A of the initial Polk Power Station Title V operation permit application, and the current Title V Permit No. 105233-012-AV identify the requirements that are applicable to the emission units that comprise this Title V source. Each emissions unit is in compliance, and will continue to comply, with the respective applicable requirements.

The emission units that comprise this Title V source will comply with future-effective applicable requirements on a timely basis.

2. Proposed Schedule for the Submission of Periodic Compliance Statements Throughout the Permit Term

Periodic compliance statements are proposed to be submitted on an annual basis within 60 days after the end of each calendar year pursuant to the requirements of FDEP Rule 62-213.440(3)(a)2.a, F.A.C.

3. Compliance Certification

I, the undersigned, am the responsible official as defined in Chapter 62-210.200(220), F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Mark Hornick

Mark Hornick
General Manager – Polk Power Station

12/4/03

Date

ATTACHMENT C

**REQUESTED TITLE V PERMIT
CONDITION CHANGES**

**TITLE V AIR OPERATION PERMIT
FINAL PERMIT REVISION NO.: 1050233-012-AV
REQUESTED PERMIT CONDITION CHANGES**

The proposed Title V permit condition changes address Unit 1 and associated units (e.g., the solid fuel gasification system and auxiliary boiler) at PPS, along with Units 2 and 3, which were included in the facility's Title V permit on June 24, 2003. A discussion of each requested permit condition change is provided in the following sections. This detailed discussion of the permit revision request is organized by each individual item. The basis for each request is presented, followed by supporting information for the request (e.g., pertinent guidance memoranda). Suggested permit language is also included for the Florida Department of Environmental Protection (FDEP) to use as a starting point for implementation of the change. For the most part, these requested modifications involve procedural issues, and do not affect the nature and character of the emissions from this facility. As such, this request is submitted as a permit revision in accordance with FDEP guidance. The page numbers indicated below are references to Title V FINAL Permit Revision No: 1050233-012-AV.

1.0 SO₂ EMISSIONS MONITORING STRATEGY (SOLID FUEL)

1.1 PROCESS DESCRIPTION

Fuel bound sulfur is primarily converted to hydrogen sulfide (H₂S) and carbonyl sulfide (COS) in the gasification process. The majority of the solid fuel sulfur species are removed from the syngas by the acid gas removal unit and the sulfuric acid plant, where the sulfur species are converted to sulfuric acid (H₂SO₄). The syngas will contain residual COS, H₂S, and possibly other sulfur compounds. After combustion of the syngas in the CT, the primary sulfur species in the exhaust is SO₂.

1.2 BASIS FOR REQUEST

Currently Conditions E.1 and E.5 of the PPS Title V permit require monitoring of the solid fuel sulfur content for the solid fuel gasification system (E.U. ID No. 006) on a once per unique fuel blend basis to assure compliance with the syngas SO₂ emission limits for the combined cycle combustion turbine (E.U. ID No. 001); reference Condition A.5. These emission limits result from the initial BACT analysis for the facility. In addition to these SO₂ emission limits, the PPS Title V permit also limits SO₂ emissions from the sulfuric acid plant (E.U. ID No. 004); reference Condition C.6. Performance tests to demonstrate compliance with the stated emission rates are required annually for both the CT and the sulfuric acid plant.

Because sulfur contained in the gasification process feedstock solid fuels is both converted to sulfuric acid and emitted to the atmosphere as SO₂, use of the feedstock solid fuel sulfur content and solid fuel input flow as a surrogate for SO₂ emissions is not as precise as direct measurement by CEMs. During the operation of this facility, TEC has demonstrated that CEMs is a viable approach (i.e., has successfully operated the units with minimal problems) for the direct measurement of CT SO₂ stack emissions. Therefore, TEC proposes to substitute CEMs as a compliance methodology for the surrogate parameter of gasification system feedstock solid fuel sulfur content. Since the majority of the SO₂ emissions occur at the CT, TEC proposes that the SO₂ emissions be monitored by the CT's CEMs, while maintaining the current annual compliance strategy for the sulfuric acid plant SO₂ emissions limit.

1.3 SUGGESTED PERMIT LANGUAGE

Condition E.1. of the Emission Unit ID No. 006 Solid Fuel Gasification System describes the permitted capacity of the emissions unit, and includes a fuel sulfur content limit as follows:

**TITLE V AIR OPERATION PERMIT
FINAL PERMIT REVISION NO.: 1050233-012-AV
REQUESTED PERMIT CONDITION CHANGES**

E.1. Permitted Capacity. Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 60.0 percent petroleum coke by weight. The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis. The maximum weight of the petroleum coke blended shall not exceed 1,395 tons per day, on a dry basis. The maximum sulfur content of the blended fuel shall not exceed 3.5 percent by weight.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-194(E)]

It is suggested that the last three sentences of this condition be removed as follows.

E.1. Permitted Capacity. Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 60.0 percent petroleum coke by weight. ~~The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis. The maximum weight of the petroleum coke blended shall not exceed 1,395 tons per day, on a dry basis. The maximum sulfur content of the blended fuel shall not exceed 3.5 percent by weight.~~
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-194(E)]

Additionally, deletion of Condition E.3 and E.4 with a modification of Conditions A.23 and E.5 are requested as follows:

From:

A.23. The owner or operator may determine compliance with the sulfur dioxide standard by calculations based on the fuel analysis for sulfur content. Certified analyses by the appropriate test method from the fuel supplier is acceptable. See specific condition A.24.
[PSD-FL-194]

To:

A.23. The owner or operator may determine compliance with the 30-day rolling average sulfur dioxide emission standard in lb/hr by using the SO₂ CEM. In the event CEMs data are not available, the owner or operator may determine compliance with the sulfur dioxide emission standard by calculations based on the fuel analysis for sulfur content. To determine the compliance while firing No.2 fuel oil, a monthly fuel oil composite sample shall be prepared from daily fuel oil samples. The records shall contain, as a minimum, for each monthly composite sample, the sulfur content of the fuels, Btu content, and density of the fuel. Certified analyses by the appropriate test method from the fuel supplier is acceptable. See specific condition A.24.
[PSD-FL-194]

From:

E.5. Recordkeeping. Written or electronic records verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 60.0 percent (1,395 tons per day) maximum petroleum coke by weight limit and the blended fuel sulfur content of 3.5 percent by weight limit specified by Specific Condition E.1., shall be maintained and submitted to the Department's Southwest District Office with each annual report. These records shall be generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified.
[PSD-FL-194(E)]

To:

E.5. Recordkeeping. Written or electronic records verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 60.0 percent ~~(1,395 tons per day)~~ maximum petroleum coke by weight ~~limit and the blended fuel sulfur content of 3.5 percent by weight limit~~ specified by Specific Condition E.1., shall be maintained and submitted to the Department's Southwest District Office with each annual report. These records shall be ~~generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified.~~ generated each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified. (e.g., a batch usually consists of a barge shipment).
[PSD-FL-194(E)]

**TITLE V AIR OPERATION PERMIT
FINAL PERMIT REVISION NO.: 1050233-012-AV
REQUESTED PERMIT CONDITION CHANGES**

2.0 SO₂ AND NO_x EMISSIONS MONITORING STRATEGY

2.1 PROCESS DESCRIPTION

PPS Unit Number 1 is a dual fuel combined cycle combustion turbine, capable of firing the primary fuel (syngas) and the back-up fuel (distillate oil). This arrangement of primary and secondary fuels, including limits on total operation on the back-up fuel is provided in permit condition A.3.

2.2 BASIS FOR REQUEST

The CT is subject to the requirements of New Source Performance Standard (NSPS) Subpart GG, Standards of Performance for Stationary Gas Turbines. One applicable provision of this NSPS is that to assure compliance with the sulfur dioxide and nitrogen oxides standards, regular sampling of the back-up fuel oil is required. Because TEC is requesting permit changes to allow the use of a continuous emissions monitoring system (CEMs) for compliance demonstration when firing syngas, TEC is also requesting permit language revisions to allow for the use of the CEMs for demonstration of compliance with the NSPS Subpart GG sulfur dioxide and nitrogen oxides emission limits when firing back-up fuel oil. Because the BACT SO₂ limits for the CT when firing fuel oil are based on a fuel oil sulfur content that is considerably less than the NSPS Subpart GG limit (i.e., a BACT fuel oil sulfur limit of no more than 0.05 weight percent sulfur vs. the 0.8 weight percent limit of Subpart GG), compliance with the BACT SO₂ emission limits specified in Condition A.5 will also provide assurance of compliance with the NSPS Subpart GG fuel sulfur content limit. Similarly, the BACT NO_x emission limit of 15 and 42 parts per million, volume dry (ppmvd) @ 15% O₂ (for syngas and fuel oil, respectively) are considerably less than the NSPS Subpart GG limit of 164 ppmvd @ 15% O₂. Accordingly, compliance with the BACT NO_x emission limits specified in Condition A.5 will also provide assurance of compliance with the NSPS Subpart GG NO_x emission limit.

TEC submitted a request to FDEP on August 7, 2000 to change the frequency of sampling the oil tank from after each fuel delivery to once per day during firing of back-up fuel. This request was based on the potential frequency of fuel oil deliveries, and the expenses associated with performing a large number of analyses. This request is continued in this permit revision; however, the fuel sampling would serve as a back up compliance demonstration method with a CEMs based method serving as the primary.

2.3 SUGGESTED PERMIT LANGUAGE

TEC proposes the following language to effect the requested change.

From:

- A.14.** The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:
- (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source. Nitrogen oxide continuous emissions monitors may be used to determine the fuel bound nitrogen content of fuel oil combusted in gas turbines subject to this requirement.
 - (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b).
[40 CFR 60.334(b)(1) & (2); and, PSD-FL-194(G)]

To:

A.14. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall demonstrate compliance with the SO₂ and NO_x 30-day rolling average emission standards in lb/hr specified in Condition A.5 via CEMs data to satisfy

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these monitoring requirements. See Conditions A.24, A.25, and A.51. In the event CEMs data are not available, the owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined from a monthly fuel oil composite sample prepared from daily fuel oil samples on each occasion that fuel is transferred to the storage tank from any other source. Nitrogen oxide continuous emissions monitors and Sulfur dioxide continuous emissions monitors may be used to determine the fuel bound nitrogen and sulfur content of fuel oil combusted in gas turbines subject to this requirement.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b).

[40 CFR 60.334(b)(1) & (2); and, PSD-FL-194(G)]

From:

A.24. The owner or operator shall determine compliance with the liquid fuel sulfur content standard of 0.05 percent, by weight, and the gaseous fuel sulfur dioxide standard as follows: ASTM D 2880-96, or the latest edition shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator. See specific conditions A.5., A.7. and A.8.

[40 CFR 60.335(d); and, PSD-FL-194]

To:

A.24. CEMs data showing compliance with the 30-day rolling average SO₂ emission standards specified in Condition A.5. shall be used to demonstrate compliance with the gaseous fuel sulfur dioxide standard and the liquid fuel sulfur content standard of 0.05 percent, by weight. See Condition A.14. In addition to any other requirements associated with the operation and maintenance of these CEMs (e.g., Acid Rain requirements), operation of the CEMs shall be in accordance with the requirements listed in A.34. The annual calibration RATA associated with these CEMs may be used in lieu of the required annual EPA Reference Method 20, provided the requirements of Rule 62-297.310, F.A.C., are met (e.g., prior test notification and proper test result submittal). Fuel sampling and analysis may be used to demonstrate compliance with the sulfur dioxide standard (limits) in the event that the SO₂ continuous emissions monitor is not able to capture valid data. Alternatively, the owner or operator shall may determine compliance with the liquid fuel sulfur content standard of 0.05 percent, by weight, and the gaseous fuel sulfur dioxide standard as follows: ASTM D 2880-96, or the latest edition shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17).or an alternative method approved by the Department. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval notification of the Administrator. See specific conditions A.5-~~A.7.~~ and A.8.

[40 CFR 60.335(d); and, PSD-FL-194]

From:

A.25. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335 (a) and 40 CFR 60.335(d) to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. See specific condition A.14.

[40 CFR 60.335(e)]

To:

A.25. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the data collected by the NO_x and SO₂ CEMs to meet the provisions for determining the fuel sulfur and nitrogen content of the fuel being burned. Alternatively, in the event that the CEMs are not able to capture valid data, the owner or operator shall may use the methods specified in 40 CFR 60.335(a) and 40 CFR 60.335(d) to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. See specific conditions **A.14 and A.24.**

From:

A.34. A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, and shall meet the performance specifications of 40 CFR 60, Appendix B, to monitor nitrogen oxides and a diluent gas (carbon dioxide or oxygen).

[PSD-FL-194(A)]

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To:

A.34. A continuous emission monitoring system (CEMs) shall be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, and shall meet the performance specifications of 40 CFR 60, Appendix B, or 40 CFR Part 75 Subpart B and C to monitor nitrogen oxides (NO_x), sulfur dioxide (SO₂), and a diluent gas (carbon dioxide or oxygen) in a manner sufficient to demonstrate compliance with the CEMs emission standard of this permit. See specific condition A.5.

- a. Emission Averages. Compliance with the 30-day rolling average for NO_x and SO₂ emissions shall be based on data collected by the required CEMs. For purposes of calculating rolling averages, the first operating day of a rolling average period for a unit shall be the first operating day that occurs on or after the specified compliance date for that unit. Once the unit has operated the necessary number of days to generate an initial 30-day average, consistent with the applicable limit, each additional day the unit operates, a new 30-day ("rolling") average is generated. Thus, after the first 30 operating days from the compliance date, the owner or operator must be in compliance with the NO_x and SO₂ emission limits based on a 30-day rolling average each subsequent operating day. If a unit operates continuously throughout the day, the operating day's average shall be the average of the 24 consecutive valid 1-hour emission averages. If a unit operates less than 24 hours during the day, the 30-day rolling average shall be the average of available valid 1-hour emission averages collected during operation for 30 unit operating days. If monitoring data is excluded (due to startup, shutdown, malfunction, or tuning), the 30-day rolling average shall be the average of the remaining available valid 1-hour emission averages collected during operation for 30 unit operating days.
- b. Data Collection. The CEMs shall be designed and operated to sample, analyze, and record NO_x, SO₂, and diluent gas (carbon dioxide or oxygen) data evenly spaced over the hour. Each 1-hour emission average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour emission average shall be computed from at least two data points separated by a minimum of 15 minutes. If the unit does not operate in more than one quadrant of a 1-hour block, the data is insufficient to determine a 1-hour emission average and shall be ignored. (Example: Unit begins startup with only ten minutes remaining in the 1-hour block. Data is insufficient to determine a 1-hour average and is ignored.) All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. The NO_x CEMs shall express the 1-hour emission averages and the 30-day rolling block averages in terms of "ppmv corrected to 15% oxygen" and "lb/hr".
- c. Data Exclusion. The CEMs at all times including episodes of startup, shutdown, malfunction, and tuning shall record NO_x, SO₂, and CO₂ emissions data. NO_x, SO₂, and CO₂ emissions data recorded during such episodes may be excluded from the 30-day rolling compliance averages in accordance with the requirements of Condition A.38.(a) of this section. All periods of data excluded due to startup, shutdown or malfunction shall be consecutive for each episode. The permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Excess Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions shall be summarized in the required semiannual report.
- d. NO_x and SO₂ Certification. The NO_x and SO₂ monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. For purposes of determining compliance with the CEMs emission standards of this permit, missing data shall not be substituted. Record keeping and reporting shall be conducted pursuant to Part 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60.
- e. CO₂ Certification. The CO₂ monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 3. Quality assurance procedures for the monitor shall conform to the requirements of 40 CFR 60, Appendix F. The RATA tests required for the CO₂ monitor shall be performed using EPA Method 3A, of Appendix A in 40 CFR 60.

[PSD-FL-194(A), Rules 62-4.070(3), 62-297.520, 62-210.700(5), and 62-212.400 (BACT), F.A.C.]

From:

A.51. Sulfur Content of Fuel. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent, by weight. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60.334 by testing for sulfur content of the fuel oil in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule. See specific condition A.8.
[PSD-FL-194]

To:

A.51. Sulfur Content of Fuel. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent, by weight. A sulfur dioxide continuous emission monitoring system (SO₂ CEMs) shall be used to demonstrate compliance of sulfur content of fuel. Alternatively, compliance may shall be demonstrated in accordance with the requirements of 40 CFR 60.334 by testing for sulfur content of the fuel oil from a monthly fuel oil composite sample prepared from daily fuel oil samples in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule. Vendor fuel oil analyses may be used to satisfy these monitoring requirements. See specific condition A.8.

[PSD-FL-194]

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3.0 WATER TO FUEL RATIO REPORTING

Reporting for excess emissions include a requirement to provide a report on any exceedance of the water-to-fuel ratio when firing fuel oil in Unit 1. This requirement is derived from NSPS Subpart GG (40 CFR 60.334(a)), which uses the water-to-fuel ratio as a surrogate parameter for demonstration of compliance with the NO_x emissions limit. The NO_x emissions from Unit 1 are measured continuously via CEMs to demonstrate compliance with a BACT emissions limit that is considerably more stringent than the NSPS emissions limit (i.e., 42 ppm versus 164 ppm). Based on U.S. EPA guidance for streamlining permit requirements for situations involving multiple regulatory requirements, TEC requests that the CEMs be used in lieu of the water-to-fuel ratio monitoring. Because compliance with the more stringent BACT NO_x emissions limit will assure compliance with the less stringent NSPS emissions limit, the compliance demonstration methodology for the BACT emissions limit can be used to satisfy the requirement for the NSPS monitoring. Additionally, the current Title V Air Operation Permit No. 1050233-012-AV for PPS Emissions Units 2 and 3 includes such a waiver as specified in Condition F.31 as follows:

CEMs in lieu of Water to Fuel Ratio: The NO_x CEMs shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMs.

TEC suggests using this condition to state that the requirements of NSPS Subpart GG are met by the direct NO_x monitoring performed by the CEMs. It is suggested that Condition A.13 be removed in its entirety, and replaced with the language similar to that used in Condition F.31 of the permit for Units 2 and 3. Because the initial NO_x CEMs certification tests have been completed for Unit 1, the language contained in Condition F.31 for Units 2 and 3 related to the calibration of the water/fuel monitoring device is not required for Unit 1. TEC proposes the following language to effect the requested change.

From:

A.13. The owner and operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO_x emissions shall operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.

[40 CFR 60.334(a); and, PSD-FL-194(a)]

To:

~~**A.13.** The owner and operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO_x emissions shall operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.~~

~~[40 CFR 60.334(a); and, PSD-FL-194(a)]~~

A.13. CEMs in lieu of Water to Fuel Ratio: The owner and operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using NO_x CEMs for compliance may use NO_x CEMs in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version).

Additionally, the replacement of Condition A.13 requires a change to Condition A.1, which calls out Condition A.13 for the periodic monitoring requirements of heat input. The heat input is used primarily to demonstrate the operational capacity of the unit, and that the potential emissions rates as modeled to support the initial PSD construction permit application are valid. To satisfy the operational capacity of the unit, it is proposed to monitor the heat input rate as part of the annual stack tests that are required by Condition A.33. As for the assurance of potential emission rates, historical operational data for heat input rate during the past two years were analyzed to assure that the operational capacity of the CT was not exceeded. The data indicates complete compliance with the reported maximum heat input rate, hence

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there is little benefit to continuing these measurements. Additionally, the use of CEMs for NO_x and SO₂ will help assure actual emission rates do not exceed the modeled potential emission rates. Hence, it is suggested that Condition A.1 be modified as follows:

From:

A.1. Permitted Capacity. The maximum heat input rate (higher heating value) is 1,755 million Btu per hour when firing syngas and 1,765 million Btu per hour when firing No. 2 fuel oil at an ambient temperature of 59°F. Manufacturer's curves approved by the Department of the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. Monitoring required under condition A.13 shall satisfy periodic monitoring requirements for heat input.

To:

A.1. Permitted Capacity. The maximum heat input rate (higher heating value) is 1,755 million Btu per hour when firing syngas and 1,765 million Btu per hour when firing No. 2 fuel oil at an ambient temperature of 59°F. Manufacturer's curves approved by the Department of the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. Monitoring required under condition ~~A.13~~ A.33 shall satisfy periodic monitoring requirements for heat input.

The inclusion of the monitoring of the heat input rate during the performance testing required by Condition A.33 is included in Section 4.2 which addresses the performance testing requirements.

Condition A.18 addresses recording fuel consumption and water to fuel ratio when determining compliance with the provisions of NSPS Subpart GG. Because a NO_x CEMs is the primary compliance strategy for these provisions, this condition is no longer needed. Therefore, TEC requests that Condition A.18 be removed in its entirety.

Condition A.40 addresses the basis for the determination of excess emissions for the purposes of burning fuel oil in the CT. This basis is the use of the water-to-fuel ratio. Because CEMs will monitor NO_x emissions, it is suggested to revise this condition as follows:

From:

A.40. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
a. Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).
[Rule 62-296.800, F.A.C.; and, 40 CFR 60.334(c)(1)]

To:

A.40. For the purposes of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
a. Nitrogen oxides. Any ~~one-hour~~ 30-day rolling average period during which the ~~NO_x 30-day rolling average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio is greater than the ppm or lb/hr limit determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test.~~ as monitored by the CEMs during oil or syngas firing exceeds 311 lb/hr or 132 lb/hr, respectively. Each report shall include the ~~NO_x 30-day rolling average emission rate as measured by the CEMs water-to-fuel ratio, average fuel consumption, ambient conditions, and gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).~~ and any other requirements in Condition A.41, through A.43.

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4.0 CLARIFICATION OF TESTING REQUIREMENTS

4.1 BASIS FOR REQUEST

TEC holds a number of Title V operating permits for our various operating facilities. Some of these permits (e.g., the Hookers Point and Big Bend permits) use a listing format to delineate these requirements, the frequency, and the appropriate test method. TEC requests that a similar table be provided in the PPS Title V permit to facilitate a clear understanding of these test requirements, and to allow for consistency of approach across the issued operating permits for several facilities.

4.2 SUGGESTED PERMIT LANGUAGE

Condition A.33 currently states the requirements of the performance testing for Unit Number 1 (E.U. ID No. 001). It is suggested that this condition be revised similar to a condition of the F.J. Gannon Station Permit¹, Condition A.3.

From:

A.33. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
8. Any combustion turbine that does not operate for more than 400 hours per year shall term of its air operation permit.
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

¹ Title V Operating Permit for the F.J. Gannon Station, located at 3602 Port Sutton Rd. Tampa, FL 33619. Title V Air Operation Permit No. 0570040-017-AV effective date of January 1, 2001.

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To:

A.33. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. Unit Number 1 shall be stack tested for visible emissions, carbon monoxide, sulfur dioxide, and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of SO₂ and NO_x CEMs may be used in lieu of the required annual EPA Reference Method 6 for SO₂ and Method 20 for NO_x as long as all of the requirements of Rule 62-297.310, F.A.C., are met. During the annual testing, the heat input rate shall be monitored as required by condition A.1.

Unit No. 1 Required Testing

Fuel - Syngas:

Nitrogen Oxides (NO_x) - Annually
Sulfur Dioxide (SO₂) - Annually
Volatile Organic Compounds (VOC) - Initial Only*
Carbon Monoxide (CO) - Annually
Particulate Matter (PM/PM₁₀) - Initial Only*
Lead (Pb) - Initial Only (A.27)
Visible Emissions (VE) - Annually
Sulfuric Acid - Initial Only (A.27)
Arsenic - Initial Only (A.27)
Beryllium - Initial Only (A.27)
Mercury - Initial Only (A.27)

Fuel - No.2 Oil:

Nitrogen Oxides (NO_x) - Annually
Sulfur Dioxide (SO₂) - Annually
Volatile Organic Compounds (VOC) - Initial Only*
Carbon Monoxide (CO) - Annually
Particulate Matter (PM / PM₁₀) - Initial Only*
Lead (Pb) - Initial Only (A.27)
Visible Emissions (VE) - Annually
Sulfur Dioxide (SO₂), % Sulfur - Monthly Composite

* Pollutants do not have a potential to emit 100 tons per year or more

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours in a federal fiscal year.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
 8. Any combustion turbine that does not operate for more than 400 hours per year shall term of its air operation permit.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests.** When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements.** If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

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Similarly, for the Auxiliary Boiler the following testing schedule shall be adhered to as required by Condition B.29:

From:

B.29. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid for more than 400 hours other than during startup.
 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

To:

B.29. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Auxiliary Boiler shall be stack tested for visible emissions and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of NOx CEMs may be used in lieu of the required annual EPA Reference Method 7, 7A, 7C, 7D, or 7H for NO_x as long as all of the requirements of Rule 62-297.310, F.A.C., are met.

Auxiliary Boiler Required Testing

Nitrogen Oxides (NO_x) - Initial Only*
Sulfur Dioxide (SO₂), %Sulfur - Monthly Composite
Particulate Matter (PM) - Initial Only*
Visible Emissions (VE) – Annually

* Pollutants do not have a potential to emit 100 tons per year or more

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during

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which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours in a federal fiscal year.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

For the Sulfuric Acid Plant, the following testing schedule shall be adhered to as required by Condition C.20:

From:

C.20. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

- (a) General Compliance Testing.
 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a

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Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

C.20. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Sulfuric Acid Plant shall be stack tested for visible emissions and sulfur dioxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30).

Sulfuric Acid Plant Required Testing

Sulfur Dioxide (SO₂) – Annually

Sulfuric Acid Mist (H₂SO₄) - Initial Only. VE will be used as a surrogate.

Visible Emissions (VE) – Annually

- (a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

For the Solid Fuel Handling System, the following testing schedule shall be adhered to as required by Condition D.5:

From:

D.5. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

- (a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to

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satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate;
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

To:

D.5. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Solid Fuel Handling System shall be tested for visible emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30).

Solid Fuel Handling System
Visible Emissions – Annually

- (a) General Compliance Testing.
3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate;
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

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For Unit Number 2 and 3 (E.U. ID No. 009 and 010), the following testing schedule shall be adhered to as required by Condition F.27:

From:

F.27. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) **General Compliance Testing.**

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) **Special Compliance Tests.** When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) **Waiver of Compliance Test Requirements.** If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

To:

F.27. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. Unit Number 2 and 3 shall be stack tested for visible emissions, carbon monoxide, sulfur dioxide, and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of NO_x CEMs may be used in lieu of the required Method 20 for NO_x as long as all of the requirements of Rule 62-297, F.A.C., are met.

Unit No. 2 and 3 Required Testing

<u>Fuel - Natural Gas:</u>	<u>Fuel – No.2 Oil:</u>
<u>Nitrogen Oxides (NO_x) – Annually</u>	<u>Nitrogen Oxides (NO_x) - Annually</u>
<u>Sulfur Dioxide (SO₂) – Annually</u>	<u>Sulfur Dioxide (SO₂) - Annually</u>
<u>Volatile Organic Compounds (VOC) - Initial Only (F.19)</u>	<u>Volatile Organic Compounds (VOC) - Initial Only (F.19)</u>
<u>Carbon Monoxide (CO) - Initial Only*</u>	<u>Carbon Monoxide (CO) - Initially Only*</u>
<u>Visible Emissions (VE) – Annually</u>	<u>Visible Emissions (VE) - Annually</u>
<u>Sulfur Dioxide (SO₂), gr/100 scf Sulfur - Annually</u>	<u>Sulfur Dioxide (SO₂), % Sulfur - Monthly Composite</u>

* Pollutants do not have a potential to emit 100 tons per year or more

(a) **General Compliance Testing.**

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3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours in a federal fiscal year.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
 8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

5.0 STARTUP, SHUTDOWN, MALFUNCTION, AND LOW LOAD OPERATION

5.1 BASIS FOR REQUEST

As mentioned above on Section 4.0, TEC holds a number of Title V operating permits and Construction permits for our various operating facilities. Some of these permits (e.g., the Bayside) better clarify the CEMs data exclusion for the facility related to startup, shutdown, malfunction, and low load operation. TEC requests that a similar condition be included in the PPS Title V permit to facilitate a clear understanding of the exclusion of monitoring data, and to allow for consistency of approach across the issued operating permits for several facilities.

5.2 SUGGESTED PERMIT LANGUAGE

In addition to what Condition A.38 currently states, it is suggested that this condition be revised similar to a condition of the Bayside Power Station Construction Permit², Condition 17.

² PSD Construction Air Permit for Bayside Power Station, located at 3602 Port Sutton Rd. Tampa, FL 33619. Construction Air Permit No. PSD-FL-301(A) and Project No. 0570040-015-AC effective date of January 9, 2002.

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From:

A.38. All continuous monitoring systems or monitoring devices shall be installed such that representative measurement of emissions or process parameters from the affected facility are obtained.

To:

A.38. All continuous monitoring systems or monitoring devices shall be installed such that representative measurement of emissions or process parameters from the affected facility are obtained.

A.38(a). Alternate Standards and CEMs Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such incidents.

a. CEMs Data Exclusion: For the following identified operational periods, NO_x and SO₂ emissions data may be excluded from the 30-day rolling compliance averages in accordance with the corresponding requirements.

(1) **Startup, Shutdown, and Malfunction:** Periods of gas turbine startup, shutdown, or malfunction data may be excluded from the 30-day rolling compliance average due to all such episodes. Gas turbine startup is the commencement of operation of a gas turbine that has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, or pollution control device imbalances, which may result in elevated emissions. Shutdown is the process of bringing a gas turbine off line and ending fuel combustion. A malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

If a CEMs reports emissions in excess of a NO_x and SO₂ 30-day rolling average standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

In addition to what Condition F.30 currently states, it is suggested that this condition be revised similar to a condition of the Bayside Power Station Construction Permit, Condition 17.

From:

F.30. CEMs for reporting excess emissions: Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). See specific Conditions F.36. and F.37. Periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards, listed in specific Condition F.4., shall be reported to the DEP Southwest District within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile within one working day).

To:

F.30. CEMs for reporting excess emissions: Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). See specific Conditions F.36. and F.37. Excluding periods specified on Condition F.30(a), periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards, listed in specific Condition F.4., shall be reported to the DEP Southwest District within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile within one working day).

F.30(a). Alternate Standards and CEMs Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such incidents.

a. Load Operation: Excluding startup, shutdown, and malfunction, the turbine is allowed up to two hours of operation below 50% base load per unit cycle (breaker closed to breaker open).

b. CEMs Data Exclusion: For the following identified operational periods, NO_x emissions data may be excluded from the 24-hr block average and/or 3-hr block average in accordance with the corresponding requirements.

(1) **Startup, Shutdown, and Malfunction:** Periods of gas turbine startup, shutdown, or malfunction data may be excluded from the 24-hr block average and/or 3-hr block compliance average due to all such episodes. Gas turbine startup is the commencement of operation of a gas turbine that has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, or pollution control device imbalances, which may result in elevated emissions. Shutdown is the process of bringing a gas turbine off line and ending fuel combustion. A malfunction is any unavoidable mechanical and/or

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electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

If a CEMs reports emissions in excess of a NO_x standard, excluding periods specified on Condition F.30(a), the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

6.0 ASSORTED PERMIT HYGIENE

In reviewing the Title V permit, TEC has identified several opportunities to perform minor changes to allow for the permit to accurately reflect the operations at the facility. These minor changes are suggested in this section.

6.1 CONDITION D.1 – FUEL HANDLING

Condition D.1 requires TEC to take reasonable precautions to prevent particulate matter (PM) emissions. One requirement is to enclose a variety of operations such as fuel storage and transfer operations. TEC takes reasonable precautions to prevent PM emissions from these operations; however, some operations are better characterized as covered as opposed to enclosed. Thus, TEC requests the following revision to the brief description section of the Solid Fuel Handling System (E.U. ID No. 005) and this permit condition to allow the permit to reflect the operations at the facility.

From:

Subsection D. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed conveying systems, rubber skirted drop points from bins, two fuel silos with an associated bag house, a fuel surge bin with an associated bag house, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is bottom unloaded to the fuel unloading bin. Fugitive emissions are controlled by water spray with surfactant applied at the unloading bin as needed. Fuel is conveyed via enclosed conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fugitive emissions from the fuel silos are controlled by an associated bag house. Fuel is then reclaimed from the silos via enclosed conveyors to the surge bin inside the slurry preparation building. Fugitive emissions from the surge bin are controlled by an associated bag house. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

To:

Subsection D. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed or covered conveying systems, rubber skirted drop points from bins, two fuel silos with an associated bag house, a fuel surge bin with an associated bag house, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is bottom unloaded to the fuel unloading bin. Fugitive emissions are controlled by water spray with surfactant applied at the unloading bin as needed. Fuel is conveyed or covered via enclosed conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fugitive emissions from the fuel silos are controlled by an associated bag house. Fuel is then reclaimed from the silos via enclosed or covered conveyors to the surge bin inside the slurry preparation

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building. Fugitive emissions from the surge bin are controlled by an associated bag house. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

From:

D.1. Methods of Operation. Particulate matter emissions from the handling of solid fuels shall be controlled by enclosing all solid fuel storage, conveyors and conveyor transfer points.

To:

D.1. Methods of Operation. Particulate matter emissions from the handling of solid fuels shall be controlled by enclosing ~~or covering~~ all solid fuel storage, conveyors and conveyor transfer points.

6.2 CONDITION A.5 – EMISSION LIMITATIONS

Condition A.5 lists emissions limits for a variety of pollutants, and includes a footnote on the limit that the emission limitations in lb/hr are 30-day rolling averages. For those pollutants (e.g., SO₂ and NO_x) that are measured using continuous emissions monitoring systems (CEMs), this footnote is appropriate. However, other pollutants (e.g., CO) will be measured by stack test using an appropriate reference test method (RTM). Typically, an RTM requires three test runs of one hour minimum each.

TEC believes it is appropriate to make the distinction that although the emissions limit is expressed on a 30-day rolling average, compliance demonstration may be performed using a shorter time period. Because a shorter averaging time is more restrictive than a longer averaging time, compliance demonstration using a RTM should be allowed since these limits that are expressed as 30-day rolling averages. To make this distinction, TEC suggests the following revision to the footnote.

(*) Emission limitations in lb/hr are 30-day rolling averages. Compliance with the 30-day rolling averages may be demonstrated using a shorter period reference test method (e.g., based on three one-hour runs).

Additionally, this condition states that these emissions limits apply in the post demonstration period. Because the demonstration period is completed, these are the appropriate limits. TEC suggests removal of the words “for the post demonstration period” to avoid any confusion, as follows:

A.5. The maximum allowable emissions ~~for the post demonstration period~~ shall not exceed the following:

This condition also requires TEC to submit fuel bound nitrogen for the low sulfur back-up fuel to the FDEP. Because the primary monitoring strategy for fuel bound nitrogen content was changed to CEMs in a prior permit revision, it is appropriate to remove this provision. The following permit language is recommended to incorporate the revisions mentioned in this section.

From:

A.5. The maximum allowable emissions for the post demonstration period shall not exceed the following:

POLLUTANT	FUEL	BASIS ^a	LB / HR ^a	TPY ^b
NO _x	Oil	42 ppmvd **	311	N/A
	Syngas	25 ppmvd	220.25	1,032.9
VOC ^c	Oil	0.028 lb/MMBtu	32	N/A
	Syngas	0.0017 lb/MMBtu	3	38.5
CO	Oil	40 ppmvd	99	N/A
	Syngas	25 ppmvd	98	430.1
PM / PM10 ^d	Oil	0.009 lb/MMBtu	17	N/A
	Syngas	0.013 lb/MMBtu	17	74.5
Pb	Oil	5.30E-5 lb/MMBtu	0.101	N/A
	Syngas	2.41E-6 lb/MMBtu	0.0035	0.067

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SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A
	Syngas	0.17 lb/MMBtu	357	1,563.7
Sulfuric Acid ^e	Syngas		55	241
Inorganic Arsenic	Syngas		0.0006	0.019
Beryllium	Syngas		0.0001	0.0029
Mercury	Syngas		0.0034	0.017

(*) Emission limitations in lb/hr are 30 day rolling averages.

(**) The emission limit for NO_x is adjusted as follows for higher fuel bound nitrogen contents up to a maximum of 0.030 percent, by weight:

FUEL BOUND NITROGEN (% by weight)	NO _x EMISSION LEVELS (ppmvd @ 15% O ₂)
0.015 or less	42
0.020	44
0.025	46
0.030	48

Using the formula: $STD = 0.0042 + F$

where:

STD = allowable NO_x emissions (% by volume at 15% O₂ and on a dry basis)

F = NO_x emission allowance for fuel bound nitrogen (FBN) defined by the following table:

FUEL BOUND NITROGEN (% by weight)	F (NO _x % by volume)
0 < N < 0.015	0
0.015 < N < 0.03	0.04 (N - 0.015)

where:

N = nitrogen content of the fuel (% by weight)

The permittee shall submit fuel bound nitrogen content data for the low sulfur fuel oil to the Southwest District office in Tampa on each occasion that fuel oil is transferred to the storage tanks from any other source. The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:

$$x(Y) + m(n) = (x+m)(Z)$$

where:

x = amount of fuel in the storage tank

Y = % FBN in the storage tank

m = amount of fuel added

n = % FBN of the fuel added

Z = % FBN of composite fuel

(a) Syngas lb/MMBtu values are based on heat input (HHV) to the solid fuel gasifier and includes emissions from the sulfuric acid plant thermal oxidizer. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen.

(b) Annual emission limits (TPY) are based on 10 percent annual capacity factor firing fuel oil.

(c) Exclusive of background concentrations.

(d) Excluding sulfuric acid mist.

(e) Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur, by weight, in the fuel oil.

[PSD-FL-194(E)]

To:

A.5. The maximum allowable emissions for the post-demonstration period shall not exceed the following:

POLLUTANT	FUEL	BASIS ^a	LB / HR [*]	TPY ^b
NO _x	Oil	42 ppmvd **	311	N/A
	Syngas	25 ppmvd	220.25	1,032.9
VOC ^c	Oil	0.028 lb/MMBtu	32	N/A
	Syngas	0.0017 lb/MMBtu	3	38.5
CO	Oil	40 ppmvd	99	N/A
	Syngas	25 ppmvd	98	430.1
PM / PM10 d	Oil	0.009 lb/MMBtu	17	N/A
	Syngas	0.013 lb/MMBtu	17	74.5
Pb	Oil	5.30E-5 lb/MMBtu	0.101	N/A
	Syngas	2.41E-6 lb/MMBtu	0.0035	0.067

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SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A
	Syngas	0.17 lb/MMBtu	357	1,563.7
Sulfuric Acid ^e	Syngas		55	241
Inorganic Arsenic	Syngas		0.0006	0.019
Beryllium	Syngas		0.0001	0.0029
Mercury	Syngas		0.0034	0.017

- (*) Emission limitations in lb/hr are 30 day rolling averages. Compliance with the 30-day rolling averages may be demonstrated using a shorter period reference test method (e.g., based on three one-hour runs).
- (**) The emission limit for NO_x is adjusted as follows for higher fuel bound nitrogen contents up to a maximum of 0.030 percent, by weight:

FUEL BOUND NITROGEN (% by weight)	NO _x EMISSION LEVELS (ppmvd @ 15% O ₂)
0.015 or less	42
0.020	44
0.025	46
0.030	48

Using the formula: $STD = 0.0042 + F$
where:

STD = allowable NO_x emissions (% by volume at 15% O₂ and on a dry basis)

F = NO_x emission allowance for fuel bound nitrogen (FBN) defined by the following table:

FUEL BOUND NITROGEN (% by weight)	F (NO _x % by volume)
0 < N < 0.015	0
0.015 < N < 0.03	0.04 (N - 0.015)

where:

N = nitrogen content of the fuel (% by weight)

~~The permittee shall submit fuel bound nitrogen content data for the low sulfur fuel oil to the Southwest District office in Tampa on each occasion that fuel oil is transferred to the storage tanks from any other source. The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:~~

~~$x(Y) + m(n) = (x+m)(Z)$~~

~~where:~~

~~x = amount of fuel in the storage tank~~

~~Y = % FBN in the storage tank~~

~~m = amount of fuel added~~

~~n = % FBN of the fuel added~~

~~Z = % FBN of composite fuel~~

(a) Syngas lb/MMBtu values are based on heat input (HHV) to the solid fuel gasifier and includes emissions from the sulfuric acid plant thermal oxidizer. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen.

(b) Annual emission limits (TPY) are based on 10 percent annual capacity factor firing fuel oil.

(c) Exclusive of background concentrations.

(d) Excluding sulfuric acid mist.

(e) Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur, by weight, in the fuel oil.

[PSD-FL-194(E)]

6.3 CONDITIONS A.7, A.49, AND A.50 – DEMONSTRATION PERIOD EMISSION LIMITS

Condition A.7 lists the emission limits that applied during the demonstration period, which is completed. Because these emission limits no longer apply, TEC suggests removing this condition in its entirety.

Condition A.49 provides emissions testing required during the demonstration period, and the submittal of performance test results. Because these requirements are satisfied and the demonstration period is completed, TEC suggests removing this condition in its entirety.

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Condition A.50 requires the submittal of a NO_x recommended BACT determination after the conclusion of the demonstration period. Because this submittal was submitted and the demonstration period is completed, TEC suggests removing this condition in its entirety.

6.4 EXCESS EMISSIONS WORDING

Condition A.10 addresses excess emissions and reporting of such. Condition A.11 contains a prohibition of excess emissions that may be reasonably prevented through actions such as proper maintenance and operation.

When compared to Conditions F.9, F.10, and F.38 for the PPS Unit Numbers 2 and 3, similarities and differences are noted. Unit Number 1 Condition A.11 and Unit Numbers 2 and 3 Condition F.10 are sufficiently similar that no changes are requested. However, Unit Number 1 Condition A.10 and A.44 and Unit Numbers 2 and 3 Conditions F.9 and F.38 are sufficiently different that TEC requests revision of the Unit Number 1 permit condition to be consistent with the provisions of the conditions for Unit Numbers 2 and 3. By having one consistent set of excess emissions requirements, TEC will be better able to meet these requirements at the PPS. It is suggested that Condition A.10 and A.44 be deleted and replace with the following text.

From:

A.10. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Best operational practices shall be documented in writing and submitted to the Department. The documentation shall include limitations on excess emissions caused by turbine startup and shall be updated within thirty (30) days of implementation of any changes.
[Rule 62-210.700(1), F.A.C.; and, PSD-FL-194]

To:

~~A.10. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Best operational practices shall be documented in writing and submitted to the Department. The documentation shall include limitations on excess emissions caused by turbine startup and shall be updated within thirty (30) days of implementation of any changes.
[Rule 62-210.700(1), F.A.C.; and, PSD-FL-194]~~
A.10. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

From:

A.44. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

To:

~~A.44. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]~~
A.44. Excess emissions report: If excess emissions occur due to a malfunction, the owner or operator shall notify DEP's Southwest District within (1) working day of identification of the excess emissions; the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

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Similarly, Condition B.45 for the Auxiliary Boiler requires reporting of excess emissions from malfunctions. TEC suggests similar changes for consistency, namely to delete Condition B.45 and replace it with the same text used for Condition A.44, with the appropriate citation changed for the referenced emissions limits.

6.5 SOLID FUEL HANDLING SYSTEM DESCRIPTION

The description for solid fuel handling is contained in Subsection D, E.U. ID No. 005. An administrative amendment was processed by FDEP on May 14, 2002 to remove the word “bottom” from the description of the type of unloading to allow for flexibility in TEC’s operations. It is suggested that the wording contained in this permit be revised in accordance with this amendment for consistency, as follows:

From:

Subsection D. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed conveying systems, rubber skirted drop points from bins, two fuel silos with an associated bag house, a fuel surge bin with an associated bag house, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is bottom unloaded to the fuel unloading bin. Fugitive emissions are controlled by water spray with surfactant applied at the unloading bin as needed. Fuel is conveyed via enclosed conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fugitive emissions from the fuel silos are controlled by an associated bag house. Fuel is then reclaimed from the silos via enclosed conveyors to the surge bin inside the slurry preparation building. Fugitive emissions from the surge bin are controlled by an associated bag house. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

To:

Subsection D. This section addresses the following emissions unit(s).

<u>E.U. ID No.</u>	<u>Brief Description</u>
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed conveying systems, rubber skirted drop points from bins, two fuel silos with an associated bag house, a fuel surge bin with an associated bag house, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is ~~bottom~~ unloaded to the fuel unloading bin. Fugitive emissions are controlled by water spray with surfactant applied at the unloading bin as needed. Fuel is conveyed via enclosed conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fugitive emissions from the fuel silos are controlled by an associated bag house. Fuel is then reclaimed from the silos via enclosed conveyors to the surge bin inside the slurry preparation building. Fugitive emissions from the surge bin are controlled by an associated bag house. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

6.6 UNIT 2 & 3 SIMPLE CYCLE COMBUSTION TURBINES

On October 4, 2002, TEC submitted a Title V Permit Revision Application requesting to modify the Title V Final Permit No. 1050233-009-AV. The modification allowed TEC to continue operating the two nominal 165 megawatt General Electric PG7241FA simple cycle, intermittent duty natural gas and No.2 fuel oil-fired combustion turbine-electric generators at Polk Power Station governed by Final

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Construction Permit No. PSD-FL-263. On March 14, 2003, comments on the DRAFT Title V Air Permit No. 1050233-012-AV were submitted to the agency on minor changes suggested by TEC. Some of these changes were applied on the FINAL Title V Air Permit No. 1050233-012-AV, but TEC would like to take the opportunity to revise these conditions for consistency with this letter and clarification along with some additional comments.

Condition F.6 should look similar to Condition 23 of TEC's PSD Permit number PSD-FL-263. Modification of Conditions F.6 is requested as follows:

From:

F.6. Visible Emissions. VE emissions shall not exceed 10 opacity.
[PSD-FL-263]

To:

F.6. Visible Emissions. VE emissions shall ~~serve as a surrogate for PM/PM10 emissions and shall~~ not exceed 10 percent opacity.
[PSD-FL-263]

As previously stated, TEC has used CEMs as the primary method of compliance for nitrogen oxides (NO_x) since the initial startup of Polk Unit 2 and 3, instead of monitoring fuel consumption and the ratio of water to fuel being fired in the turbine. To maintain consistency with Specific Condition F.31 and Condition 41 of Permit No. PSD-FL-263, Condition F.12 and F.16 should be removed in their entirety, since they were not on the original Construction Permit No. PSD-FL-263. TEC intends to demonstrate compliance will all applicable NO_x limits primarily through the use of CEMs data.

As proposed on Section 2.0 and above to allow the use of CEMs for compliance demonstration with the nitrogen content of the fuel being fired in the turbine, TEC suggests similar changes for consistency to Condition F.13 and F.34 as follows:

From:

F.13. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:
(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b). See specific Condition F.31., for only nitrogen.
[40 CFR 60.334(b)(1) & (2)]

To:

F.13. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall demonstrate compliance with the NO_x 24-hr block average and/or 3-hr block average emission standards in lb/hr specified in Condition F.4 via CEMs data to satisfy these monitoring requirements. In the event CEMs data are not available, the owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:
(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined ~~on each occasion that fuel is transferred to the storage tank from any other source~~ from a monthly fuel oil composite sample prepared from daily fuel oil samples. Nitrogen oxide CEMs may be used to determine the fuel bound nitrogen content of fuel oil combusted in gas turbines subject to this requirement as well as vendor

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fuel oil analyses may be used to satisfy the sulfur content monitoring requirements. See specific Condition F.31. for nitrogen and F.34 for sulfur.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b). ~~See specific Condition F.31., for only nitrogen.~~

[40 CFR 60.334(b)(1) & (2)]

From:

F.34. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d). See specific Condition F.31., for only nitrogen.
[PSD-FL-263]

To:

F.34. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and/or nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d). Alternatively, the permittee may use the monthly composite analysis to meet the provisions for determining the fuel sulfur content and the data collected by the NO_x CEMs to meet the provisions for determining the fuel nitrogen content. See specific Conditions F.13 and F.31., for only nitrogen.

[PSD-FL-263]

From:

F.35. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
a. Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a). See specific Condition F.31.
[Rule 62-296.800, F.A.C.; and, 40 CFR 60.334(c)(1)]

To:

F.35. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:
a. *Nitrogen oxides.* Any ~~one-hour~~ period during which the NO_x 24-hr block average and/or 3-hr block average ~~water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test.~~ as monitored by the CEMs during oil or natural gas firing exceeds 42 ppmvd (319 lb/hr) or 10.5 ppmvd (59 lb/hr), respectively. Each report shall include the NO_x 24-hr block average and/or 3-hr block average emission rate as measured by the CEMs ~~water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).~~ and any other requirement in Condition F.36 through F.38. See specific Condition F.31.

[Rule 62-296.800, F.A.C.; and, 40 CFR 60.334(c)(1)]

6.7 SULFURIC ACID PLANT

Specific Condition C.14 should reflect the minimum sample volume to be 30 dry standard cubic feet not 40 dry standard cubic feet, since the Sulfuric Acid Plant is not subject to Subpart H regulations and Martin Costello from the FDEP approved sampling at a lower volume. TEC suggests the following:

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From:

C.14. Acid Mist/Sulfur Dioxide. The test method for acid mist shall be EPA Method 8, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department. The minimum sample volume for the EPA Method 8 test shall be 40 dry standard cubic feet. The test method for sulfur dioxide shall be EPA Method 6C, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department.
[Rule 62-296.402(3)(b), F.A.C.; and, applicant request received November 25, 2002]

To:

C.14. Acid Mist/Sulfur Dioxide. The test method for acid mist shall be EPA Method 8, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department. The minimum sample volume for the EPA Method 8 test shall be ~~40~~30 dry standard cubic feet. The test method for sulfur dioxide shall be EPA Method 6C, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department.
[Rule 62-296.402(3)(b), F.A.C.; and, applicant request received November 25, 2002]

ATTACHMENT D

MARK-UP OF CURRENT

TITLE V PERMIT

Tampa Electric Company
Polk Power Station
Facility ID No.: 1050233
Polk County

Title V Air Operation Permit Revision
FINAL Permit Revision No.: 1050233-012-AV

Permitting Authority:

State of Florida
Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114
Fax: 850/922-6979

Compliance Authority:

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

Title V Air Operation Permit Revision
FINAL Permit Revision No.: 1050233-012-AV

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Permittee: Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601-0111

FINAL Permit Revision No.: 1050233-012-AV
Facility ID No.: 1050233
SIC Nos.: 49, 4911
Project: Title V Air Operation Permit Revision

This permit revision is to incorporate the provisions of permit PSD-FL-263 for the construction of two gas turbines and establish EPA Method 8 as the acid mist test method and EPA Method 6C as the sulfur dioxide test method for the Sulfuric Acid Plant (E. U. ID No. -004). This facility is located at 9995 State Route 37 South, Mulberry, Polk County; UTM Coordinates: Zone 17, 402.45 km East and 3067.35 km North; Latitude: 27° 43' 43" North and Longitude: 81° 59' 23" West.

This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
APPENDIX TV-4, TITLE V CONDITIONS version dated 02/12/02
APPENDIX SS-1, STACK SAMPLING FACILITIES (version dated 10/07/96)
APPENDIX 40 CFR 60 Subpart A-General Provisions (version dated 07/23/97)
TABLE 297.310-1, CALIBRATION SCHEDULE (version dated 10/07/96)
FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION
AND MONITORING SYSTEM PERFORMANCE REPORT (version dated 07/96)
PHASE II ACID RAIN APPLICATION/COMPLIANCE PLAN (received January 21, 1998)
APPENDIX H-1, PERMIT HISTORY/ID NUMBER CHANGES
EPA LETTER GRANTING THE PETITION FOR EXEMPTION FROM THE OPACITY MONITORING
REQUIREMENTS OF PART 75 FOR POLK UNIT 1 (dated May 9, 2001)

Effective Date: January 1, 2000
Title V Permit Revision Effective Date: May 25, 2003
Renewal Application Due Date: July 5, 2004
Expiration Date: December 31, 2004

Howard L. Rhodes, Director
Division of Air Resource
Management

HLR/sms/ejs

Section I. Facility Information.

Subsection A. Facility Description.

The regulated emissions units at the solid fuel gasification facility include a 260 megawatt (electric) combined cycle combustion turbine which fires syngas or No. 2 fuel oil; an auxiliary boiler which fires No. 2 fuel oil; a sulfuric acid plant; a solid fuel handling system; a solid fuel gasification system; and, two nominal 165 megawatt simple cycle gas turbines firing either natural gas or No. 2 fuel oil.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the initial Title V permit application received October 4, 1996, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U.

ID No.

Brief Description

-001	260 MW Combined Cycle Combustion Turbine
-003	120 Million Btu per Hour Auxiliary Boiler
-004	Sulfuric Acid Plant
-005	Solid Fuel Handling System
-006	Solid Fuel Gasification System
-009	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-2
-010	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-3

Unregulated Emissions Units and/or Activities

- | | |
|------|--|
| -007 | One or more emergency generators which are not subject to the Acid Rain Program and have a total fuel consumption, in the aggregate, of 32,000 gallons per year or less of diesel fuel, 4,000 gallons per year or less of gasoline, 4.4 million cubic feet per year or less of natural gas or propane, or an equivalent prorated amount if multiple fuels are used. |
| -008 | One or more heating units and general purpose internal combustion engines which are not subject to the Acid Rain Program and have a total fuel consumption, in the aggregate, of 32,000 gallons per year or less of diesel fuel, 4,000 gallons per year or less of gasoline, 4.4 million cubic feet per year or less of natural gas or propane, or an equivalent prorated amount if multiple fuels are used. |

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1: Permit History

Statement of Basis

These documents are on file with the permitting authority:

Initial Title V Air Operation Permit effective January 1, 2000

Application for a Title V Air Operation Permit Revision received October 7, 2002

Additional information received November 25, 2002

Comments received On March 17, 2003

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.

{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard.

Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.

[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).

a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

and,

b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.

[Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.

[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

7. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

[Rule 62-296.320(1)(a), F.A.C.]

8. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include: enclosing all solid fuel storage, conveyors, and conveyor transfer points; chemical or water application to unpaved road and unpaved yard areas; paving and maintenance of roads, parking areas, and yards; landscaping or planting of vegetation; confining abrasive blasting where possible; and other techniques, as necessary, to all facilities to maintain an opacity of less than or equal to five percent.

[Rule 62-296.320(4)(c)2., F.A.C.; PSD-FL-194E]

9. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.

[Rule 62-213.440, F.A.C.]

10. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Southwest District office:

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

11. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch, Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155, Fax: 404/562-9164

12. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.

[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of APPENDIX TV-4, TITLE V CONDITIONS.)}

13. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions unit(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-001	260 MW Combined Cycle Combustion Turbine

The integrated solid fuel gasification combined cycle combustion turbine is a General Electric Model Number 7F, 260 megawatt (electric) unit capable of firing syngas or No. 2 fuel oil. The maximum heat input at 59^o F is 1,755 million Btu per hour when firing syngas and 1,765 million Btu per hour when firing No. 2 fuel oil. The combustion turbine uses nitrogen diluent injection when firing syngas and water injection when firing No. 2 fuel oil to control emissions of nitrogen oxides.

{Permitting note(s): The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994. The combined cycle combustion turbine began operation in April, 1996.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum heat input rate (higher heating value) is 1,755 million Btu per hour when firing syngas and 1,765 million Btu per hour when firing No. 2 fuel oil at an ambient temperature of 59^o F. Manufacturer's curves approved by the Department for the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. Monitoring required under condition ~~A.13.~~A.33 shall satisfy periodic monitoring requirements for heat input.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; PSD-FL-194, and, applicant agreement with EPA on January 22, 1999]

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **A.28.**

[Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation. Fuels.

- a. This emissions unit fires syngas as the primary fuel.
- b. This emissions unit fires No. 2 distillate oil. The firing of No. 2 fuel oil is limited to a 10 percent annual capacity factor to be determined as follows:

$$[\text{Load (\%)}] / 100\% * \text{hrs. of operation} \leq 876 \text{ hrs}$$

[Rules 62-212.400, 62-212.410, and 62-213.410, F.A.C.; and, PSD-FL-194]

A.4. Hours of Operation. This emissions unit may operate continuously, i.e., 8,760 hours/year.
 [Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.5. The maximum allowable emissions for the ~~post demonstration period~~ shall not exceed the following:

POLLUTANT	FUEL	BASIS ^a	LB / HR [*]	TPY ^b
NO _X	Oil	42 ppmvd ^{**}	311	N/A
	Syngas	25 ppmvd	220.25	1,032.9
VOC ^c	Oil	0.028 lb/MMBtu	32	N/A
	Syngas	0.0017 lb/MMBtu	3	38.5
CO	Oil	40 ppmvd	99	N/A
	Syngas	25 ppmvd	98	430.1
PM / PM ₁₀ ^d	Oil	0.009 lb/MMBtu	17	N/A
	Syngas	0.013 lb/MMBtu	17	74.5
Pb	Oil	5.30E-5 lb/MMBtu	0.101	N/A
	Syngas	2.41E-6 lb/MMBtu	0.0035	0.067
SO ₂	Oil	0.048 lb/MMBtu	92.2	N/A
	Syngas	0.17 lb/MMBtu	357	1,563.7
Sulfuric Acid ^e	Syngas		55	241
Inorganic Arsenic	Syngas		0.0006	0.019
Beryllium	Syngas		0.0001	0.0029
Mercury	Syngas		0.0034	0.017

(*) Emission limitations in lb/hr are 30 day rolling averages. [Compliance with the 30-day rolling averages may be demonstrated using a shorter period reference test method \(e.g., based on three one-hour runs\).](#)

(**) The emission limit for NO_X is adjusted as follows for higher fuel bound nitrogen contents up to a maximum of 0.030 percent, by weight:

FUEL BOUND NITROGEN (% by weight)	NO _X EMISSION LEVELS (ppmvd @ 15% O ₂)
0.015 or less	42
0.020	44
0.025	46
0.030	48

Using the formula: $STD = 0.0042 + F$

where:

STD = allowable NO_X emissions (% by volume at 15% O₂ and on a dry basis)

F = NO_X emission allowance for fuel bound nitrogen (FBN) defined by the following table:

FUEL BOUND NITROGEN (% by weight)	F (NO _X % by volume)
$0 < N < 0.015$	0
$0.015 < N < 0.03$	$0.04 (N - 0.015)$

where:

N = nitrogen content of the fuel (% by weight)

~~_____ The permittee shall submit fuel bound nitrogen content data for the low sulfur fuel oil to the Southwest District office in Tampa on each occasion that fuel oil is transferred to the storage tanks from any other source. The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:~~

~~_____ $x(Y) + m(n) = (x+m)(Z)$~~

~~_____ where:~~

~~_____ x = amount of fuel in the storage tank~~

~~_____ Y = % FBN in the storage tank~~

~~_____ m = amount of fuel added~~

~~_____ n = % FBN of the fuel added~~

~~_____ Z = % FBN of composite fuel~~

(a) Syngas lb/MMBtu values are based on heat input (HHV) to the solid fuel gasifier and includes emissions from the sulfuric acid plant thermal oxidizer. Pollutant concentrations in ppmvd are corrected to 15 percent oxygen.

(b) Annual emission limits (TPY) are based on 10 percent annual capacity factor firing fuel oil.

(c) Exclusive of background concentrations.

(d) Excluding sulfuric acid mist.

(e) Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur, by weight, in the fuel oil.

[PSD-FL-194(E)]

A.6. After the demonstration period, the permittee shall operate the combustion turbine in a manner to achieve the lowest possible NO_x emission rate, but this rate shall not exceed 25 ppmvd corrected to 15 percent oxygen and ISO conditions.
 [PSD-FL-194]

A.7. The maximum allowable emissions during the two year demonstration period shall not exceed the following:

POLLUTANT	FUEL ^a	LB/HR [±]	TPY [#]
NO _x	Oil	344	N/A
	Syngas	664.2	2,908.3
VOC ^b	Oil	32	N/A
	Syngas	3	38.5
CO	Oil	99	N/A
	Syngas	99	430.4
PM/PM ₁₀ ^e	Oil	17	N/A
	Syngas	17	74.5
Pb	Oil	0.101	N/A
	Syngas	0.023	0.13
SO ₂	Oil	92.2	N/A
	Syngas	518	2,269
Sulfuric Acid ^d	Syngas	55	241
Inorganic Arsenic	Syngas	0.08	0.35
Beryllium	Syngas	0.0004	0.0029
Mercury	Syngas	0.025	0.11

(*) — Emission limitations in lb/hr are 30 day rolling averages.

(**) — The emission limit for NO_x is adjusted as follows for higher fuel bound nitrogen contents up to a maximum of 0.030 percent, by weight:

FUEL BOUND NITROGEN (% by weight)	NO _x EMISSION LEVELS (ppmvd @ 15% O ₂)
0.015 or less	42
0.020	44
0.025	46
0.030	48

Using the formula: $STD = 0.0042 + F$

where: STD = allowable NO_x emissions (% by volume at 15% O₂ and on a dry basis)

F = NO_x emission allowance for fuel bound nitrogen (FBN) defined by the following table:

FUEL BOUND NITROGEN (% by weight)	F (NO _x % by volume)
0 < N < 0.015	0
0.015 < N < 0.03	0.04 (N - 0.015)

where: N = nitrogen content of the fuel (% by weight)

~~—————The permittee shall submit fuel bound nitrogen content data for the low sulfur fuel oil to the Southwest District office in Tampa on each occasion that fuel oil is transferred to the storage tanks from any other source. The percent FBN (Z) following each delivery of fuel shall be determined by the following equation:~~

$$\text{————— } x(Y) + m(n) = (x+m)(Z)$$

~~————— where:~~

~~————— x = amount of fuel in the storage tank~~

~~————— Y = % FBN in the storage tank~~

~~————— m = amount of fuel added~~

~~————— n = % FBN of the fuel added~~

~~————— Z = % FBN of composite fuel~~

~~(a) — Annual emission limits (TPY) are based on 10 percent annual capacity factor firing fuel oil.~~

~~(b) — Exclusive of background concentrations.~~

~~(c) — Excluding sulfuric acid mist.~~

~~(d) — Sulfuric acid mist emissions assume a maximum of 0.05 percent sulfur, by weight, in the fuel oil. [PSD-FL-194(A)]~~

A.8. Sulfur Dioxide - Sulfur Content. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. See specific condition **A.51**.
[PSD-FL-194]

A.9. Visible Emissions. Visible emissions shall not exceed 10 percent opacity when firing syngas and 20 percent opacity when firing No. 2 fuel oil.
[PSD-FL-194]

Excess Emissions

~~A.10. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Best operational practices shall be documented in writing and submitted to the Department. The documentation shall include limitations on excess emissions caused by turbine startup and shall be updated within thirty (30) days of implementation of any changes.~~

A.10. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

[Rule 62-210.700(1), F.A.C.; and, PSD-FL-194]

A.11. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.]

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

Monitoring of Operations

A.12. At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

~~A.13. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO_x emissions shall operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator.~~

A.13. CEMs in lieu of Water to Fuel Ratio: The owner and operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using NO_x CEMs for compliance may use NO_x CEMs in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version).

[40 CFR 60.334(a); and , PSD-FL-194(A)]

A.14. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall demonstrate compliance with the SO₂ and NO_x 30-day rolling average emission standards in lb/hr specified in Condition A.5 via CEMs data to satisfy these monitoring requirements. See Conditions A.24, A.25, and A.51. In the event CEMs data are not available, ~~the~~ the owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined from a monthly fuel oil composite sample prepared from daily fuel oil samples on each occasion that fuel is transferred to the storage tank from any other source. Nitrogen oxide continuous emissions monitors and Sulfur dioxide continuous emissions monitors may be used to determine the fuel bound nitrogen content nitrogen and sulfur of fuel oil combusted in gas turbines subject to this requirement.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b).

[40 CFR 60.334(b)(1) & (2); and, PSD-FL-194(G)]

A.15. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.16. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired.

[40 CFR 60.335(a); and , PSD-FL-194(A)]

A.17. During performance tests to determine compliance, measured NO_X emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_X = [NO_X \text{ obs}] [(P_{ref})^{0.5} / P_{obs}] e^{19 [H_{obs} - 0.00633]} [288^\circ K / T_{amb}]^{1.53}$$

where:

NO_X = Emissions of NO_X at 15 percent oxygen and ISO standard ambient conditions.

NO_X obs = Measured NO_X emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

e = Transcendental constant (2.718)

H_{obs} = Specific humidity of ambient air at test.

T_{amb} = Temperature of ambient air at test.

[40 CFR 60.335(c)(1); and, PSD-FL-194(A)]

~~A.18. When determining compliance with 40 CFR 60.332, Subpart GG—Standards of Performance for Stationary Gas Turbines, the monitoring device of 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with the permitted NO_X standard at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.~~

~~[40 CFR 60.335(e)(2); and, PSD-FL-194(A)]~~

A.19. The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 as follows:

c. U.S. EPA Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in 40 CFR 60.335(c)(2).

[40 CFR 60.335(c)(3)]

A.20. Volatile Organic Compounds. The test method for volatile organic compounds shall be EPA Method 18, incorporated by reference in Chapter 62-297, F.A.C.

[PSD-FL-194]

A.21. Carbon Monoxide. The test method for carbon monoxide shall be EPA Method 10, incorporated by reference in Chapter 62-297, F.A.C.

[PSD-FL-194]

A.22. PM/PM10. The test method for PM / PM₁₀ when firing oil shall be EPA Method 5B, incorporated by reference in Chapter 62-297, F.A.C.

[PSD-FL-194]

A.23. The owner or operator may determine compliance with the 30-day rolling average sulfur dioxide emission standard in lb/hr by using the SO₂ CEM. In the event CEMs data are not available, the owner or operator may determine compliance with the sulfur dioxide emission standard by calculations based on the fuel analysis for sulfur content. To determine the compliance while firing No.2 fuel oil, a monthly fuel oil composite sample shall be prepared from daily fuel oil samples. The records shall contain, as a minimum, for each monthly composite sample, the sulfur content of the fuels, Btu content, and density of the fuel. Certified analyses by the appropriate test method from the fuel supplier is acceptable. See specific condition **A.24.**

[PSD-FL-194]

A.24. CEMs data showing compliance with the 30-day rolling average SO₂ emission standards specified in Condition A.5. shall be used to demonstrate compliance with the gaseous fuel sulfur dioxide standard and the liquid fuel sulfur content standard of 0.05 percent, by weight. See Condition A.14. In addition to any other requirements associated with the operation and maintenance of these CEMs (e.g., Acid Rain requirements), operation of the CEMs shall be in accordance with the requirements listed in A.34. The annual calibration RATA associated with these CEMs may be used in lieu of the required annual EPA Reference Method 20, provided the requirements of Rule 62-297.310, F.A.C., are met (e.g., prior test notification and proper test result submittal). Fuel sampling and analysis may be used to demonstrate compliance with the sulfur dioxide standard (limits) in the event that the SO₂ continuous emissions monitor is not able to capture valid data. Alternatively, the owner or operator shall may determine compliance with the liquid fuel sulfur content standard of 0.05 percent, by weight, and the gaseous fuel sulfur dioxide standard as follows: ASTM D 2880-96, or the latest edition shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92, or the latest edition, shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40

CFR 60.17); or an alternative method approved by the Department. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval notification of the Administrator. See specific conditions ~~A.5.~~ ~~A.7.~~ and ~~A.8.~~
[40 CFR 60.335(d); and, PSD-FL-194]

A.25. To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the data collected by the NO_x and SO₂ CEMs to meet the provisions for determining the fuel sulfur and nitrogen content of the fuel being burned. Alternatively, in the event that the CEMs are not able to capture valid data, the owner or operator shall~~may~~ use the methods specified in 40 CFR 60.335 (a) and 40 CFR 60.335(d) to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. See specific conditions A.14. and A.24.
[40 CFR 60.335(e)]

A.26. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C.
[PSD-FL-194]

A.27. Lead, Sulfuric Acid Mist, Inorganic Arsenic, Beryllium, and Mercury. The initial compliance test requirement for these pollutants has been satisfied and no further tests are required.
[PSD-FL-194]

A.28. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity (i.e., at less than 90 percent of the maximum operation rate allowed by the permit); in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted, provided however, operations do not exceed 100 percent of the maximum operation rate allowed by the permit. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rule 62-297.310(2), F.A.C.; and, PSD-FL-194(A)]

A.29. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

A.30. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

A.31. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

- c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

A.32. The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

A.33. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. Unit Number 1 shall be stack tested for visible emissions, carbon monoxide, sulfur dioxide, and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of SO₂ and NO_x CEMs may be used in lieu of the required annual EPA Reference Method 6 for SO₂ and Method 20 for NO_x as long as all of the requirements of Rule 62-297.310, F.A.C., are met. During the annual testing, the heat input rate shall be monitored as required by condition A.1.

Unit No. 1 Required Testing

Fuel - Syngas:

- Nitrogen Oxides (NO_x) - Annually
- Sulfur Dioxide (SO₂) - Annually
- Volatile Organic Compounds (VOC) - Initial Only*
- Carbon Monoxide (CO) - Annually
- Particulate Matter (PM/PM₁₀) - Initial Only*
- Lead (Pb) - Initial Only (A.27)
- Visible Emissions (VE) - Annually
- Sulfuric Acid - Initial Only (A.27)
- Arsenic - Initial Only (A.27)
- Beryllium - Initial Only (A.27)
- Mercury - Initial Only (A.27)

Fuel - No.2 Oil:

- Nitrogen Oxides (NO_x) - Annually
- Sulfur Dioxide (SO₂) - Annually
- Volatile Organic Compounds (VOC) - Initial Only*
- Carbon Monoxide (CO) - Annually
- Particulate Matter (PM / PM₁₀) - Initial Only*
- Lead (Pb) - Initial Only (A.27)
- Visible Emissions (VE) - Annually
- Sulfur Dioxide (SO₂), % Sulfur - Monthly Composite

* Pollutants do not have a potential to emit 100 tons per year or more

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not

require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours in a federal fiscal year.
4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
- a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
8. Any combustion turbine that does not operate for more than 400 hours per year shall term of its air operation permit.
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; and, SIP approved]

Continuous Monitoring Requirements

A.34. A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, and shall meet the performance specifications of 40 CFR 60, Appendix B, or 40 CFR Part 75 Subpart B and C or 40 CFR Part 75 Subpart B and C to monitor nitrogen oxides (NO_x), sulfur dioxide (SO₂), and a diluent gas (carbon dioxide or oxygen). in a manner sufficient to demonstrate compliance with the CEMs emission standard of this permit. See specific condition A.5.

- a. **Emission Averages.** Compliance with the 30-day rolling average for NO_x and SO₂ emissions shall be based on data collected by the required CEMs. For purposes of calculating rolling averages, the first operating day of a rolling average period for a unit shall be the first operating day that occurs on or after the specified compliance date for that unit. Once the unit has operated the necessary number of days to generate an initial 30-day average, consistent with the applicable limit, each additional day the unit operates, a new 30-day ("rolling") average is generated. Thus, after the first 30 operating days from the compliance date, the owner or operator must be in compliance with the NO_x and SO₂ emission limits based on a 30-day rolling average each subsequent operating day. If a unit operates continuously throughout the day, the operating day's average shall be the average of the 24 consecutive valid 1-hour emission averages. If a unit operates less than 24 hours during the day, the 30-day rolling average shall be the average of available valid 1-hour emission averages collected during operation for 30 unit operating days. If monitoring data is excluded (due to startup, shutdown, malfunction, or tuning), the 30-day rolling average shall be the average of the remaining available valid 1-hour emission averages collected during operation for 30 unit operating days.
- b. **Data Collection.** The CEMs shall be designed and operated to sample, analyze, and record NO_x, SO₂, and diluent gas (carbon dioxide or oxygen) data evenly spaced over the hour. Each 1-hour emission average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour emission average shall be computed from at least two data points separated by a minimum of 15 minutes. If the unit does not operate in more than one quadrant of a 1-hour block, the data is insufficient to determine a 1-hour emission average and shall be ignored. (Example: Unit begins startup with only ten minutes remaining in the 1- hour block. Data is insufficient to determine a 1-hour average and is ignored.) All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. The NO_x CEMs shall express the 1-hour emission averages and the 30-day rolling block averages in terms of "ppmv corrected to 15% oxygen" and "lb/hr".
- c. **Data Exclusion.** The CEMs at all times including episodes of startup, shutdown, malfunction, and tuning shall record NO_x, SO₂, and CO₂ emissions data. NO_x, SO₂, and CO₂ emissions data recorded during such episodes may be excluded from the 30-day rolling compliance averages in accordance with the requirements of Condition A.38.(a) of this section. All periods of data excluded due to startup, shutdown or

malfunition shall be consecutive for each episode. The permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Excess Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions shall be summarized in the required semiannual report.

- d. **NO_x and SO₂ Certification.** The NO_x and SO₂ monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. For purposes of determining compliance with the CEMs emission standards of this permit, missing data shall not be substituted. Record keeping and reporting shall be conducted pursuant to Part 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60.
- e. **CO₂ and O₂ Certification.** The CO₂ and O₂ monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 3. Quality assurance procedures for the monitor shall conform to the requirements of 40 CFR 60, Appendix F. The RATA tests required for the CO₂ and O₂ monitor shall be performed using EPA Method 3, 3A, or 3B of Appendix A in 40 CFR 60, or by other approved alternative.

[PSD-FL-194(A)]

A.35. A performance evaluation of the CEMS shall be conducted during any required performance test or within 30 days thereafter in accordance with the applicable performance specifications of 40 CFR 60, Appendix B and at other times as required by the Administrator. [40 CFR 60.13(c); and, PSD-FL-194(A)]

A.36. The zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts shall be checked at least once daily in accordance with a written procedure. The zero and span shall, at a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications of 40 CFR 60, Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified. [40 CFR 60.13(d)(1); and, PSD-FL-194(A)]

A.37. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d)(1), all continuous monitoring systems shall be in continuous operation and shall meet the minimum frequency of operation as follows:
(2) All continuous monitoring systems for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. [40 CFR 60.13(e); and, PSD-FL-194(A)]

A.38. All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained.

A.38(a). Alternate Standards and CEMs Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such incidents.

a. CEMs Data Exclusion: For the following identified operational periods, NO_x and SO₂ emissions data may be excluded from the 30-day rolling compliance averages in accordance with the corresponding requirements.

(1) Startup, Shutdown, and Malfunction: Periods of gas turbine startup, shutdown, or malfunction data may be excluded from the 30-day rolling compliance average due to all such episodes. Gas turbine startup is the commencement of operation of a gas turbine that has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, or pollution control device imbalances, which may result in elevated emissions. Shutdown is the process of bringing a gas turbine off line and ending fuel combustion. A malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

If a CEMs reports emissions in excess of a NO_x and SO₂ 30-day rolling average standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

[40 CFR 60.13(f); and, PSD-FL-194(A)]

A.39. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdown, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g. ppm pollutant and percent O₂ or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit. (e.g. rounded to the nearest 1 percent opacity).

[40 CFR 60.13(h); and, PSD-FL-194(A)]

Record Keeping and Reporting Requirements

A.40. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:

a. Nitrogen oxides. Any ~~one-hour~~ period during which the NO_x 30-day rolling average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test as monitored by the CEMs during oil or syngas firing exceeds 311 lb/hr or 132 lb/hr, respectively. Each report shall include the NO_x 30-day rolling average emission rate as measured by the CEMs water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a) and any other requirements in Condition A.41. through A.43.

[Rule 62-296.800, F.A.C.; and, 40 CFR 60.334(c)(1)]

A.41. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[40 CFR 60.7(c)(1), (2), (3), & (4)]

A.42. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form

shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.
[40 CFR 60.7(d)(1) & (2)]

A.43. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

- (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;
- (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and
- (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).

[40 CFR 60.7(e)(1)]

~~A.44. Malfunction Reporting. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.~~

A.44. Excess emissions report: If excess emissions occur due to a malfunction, the owner or operator shall notify DEP's Southwest District within (1) working day of identification of the excess emissions; the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

[Rule 62-210.700(6), F.A.C.]

A.45. All recorded data shall be maintained on file by the Source for a period of five years.

[Rule 62-213.440, F.A.C.]

A.46. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.

12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.

15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

Miscellaneous Requirements.

A.47. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.

[40 CFR 60.2; and, Rule 62-204.800(7)(a), F.A.C.]

A.48. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

~~A.49. The combustion turbine shall be operated for 12 to 18 months after the demonstration period (estimated to be from Mid-1998 until December 31, 1999) as described in the previous specific condition. During this period, NO_x emission testing will be performed on the turbine at a regular interval of every two months. The Department shall be provided with the test protocol, including a time schedule, 15 days prior to the initial test. The permittee will provide the Department the emissions test results 30 days after the test is performed. These results are not for compliance purposes. The Department shall be notified and the reasons provided if a scheduled test is delayed or canceled.~~

[PSD-FL-194]

~~A.50. One month after the test period ends (estimated to be by February, 2000), the permittee shall submit to the Department a NO_x recommended BACT Determination as if it were a new source, using the data gathered on this facility, other similar facilities and the manufacturer's research. The Department will make a determination of BACT for NO_x only and adjust the NO_x emission limits accordingly.
[PSD-FL-194]~~

A.51. Sulfur Content of Fuel. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent, by weight. A sulfur dioxide continuous emission monitoring system (SO₂ CEMs) shall be used to demonstrate compliance of sulfur content of fuel. Alternatively, compliance shall may be demonstrated in accordance with the requirements of 40 CFR 60.334 by testing for sulfur content of the fuel oil from a monthly fuel oil composite sample prepared from daily fuel oil samples in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule. Vendor fuel oil analyses may be used to satisfy these monitoring requirements. See specific condition A.8.
[PSD-FL-194]

A.52. [Reserved]

A.53. During syngas firing, the SO₂ emission rate shall be monitored by the CEM for purposes of periodic monitoring.
[Applicant agreement with EPA on January 22, 1999]

A.54. Additional Monitoring for Nitrogen Oxides. The permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the unit begin firing syngas produced from blends of petroleum coke and coal, CEMS data demonstrating that the operational changes did not result in a significant emissions increase of nitrogen oxides when compared to the past actual coal levels. The CEMS data shall be of the periods when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.
[PSD-FL-194(E)]

A.55. Additional Monitoring for Sulfur Dioxide. The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit begin firing syngas produced from blends of petroleum coke and coal, CEMS data demonstrating that the operational changes did not result in a significant emissions increase of sulfur dioxide when compared to the past actual coal levels. The CEMS data shall be of the periods when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.
[PSD-FL-194(E)]

A.56. Additional Monitoring for Sulfuric Acid Mist. The permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit begin firing syngas produced from blends of petroleum coke and coal, test results demonstrating that the operation changes did not result in a significant emissions increase of sulfuric acid mist when compared to the past actual coal levels. The sulfuric acid mist emissions shall be based on test results using EPA Method 8. The test shall be conducted when the unit is burning syngas produced from petcoke/coal blends containing a maximum amount of petcoke of up to 60 percent, by weight.

[PSD-FL-194(E)]

A.57. Recordkeeping. To determine compliance with the syngas and fuel oil firing heat input limitation, the permittee shall maintain daily records of syngas and fuel oil consumption for the turbine and heating value for each fuel. All records shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Department upon request.

The permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the unit begin firing syngas produced from blends of petroleum coke and coal, data demonstrating that the operational change associated with the use of petroleum coke did not result in a significant emission increase pursuant to Rule 62-210.200(12)(d), F.A.C.

[PSD-FL-194(E)]

Section III. Emissions Unit(s) and Conditions.

Subsection B. This section addresses the following emissions unit(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-003	120 Million Btu per Hour Auxiliary Boiler

The Auxiliary Boiler produces steam for in-plant use and has a maximum heat input of 120.0 million Btu per hour. The boiler is fired with only very low sulfur fuel oil and has a capacity factor of less than or equal to 35 percent. The boiler can be continuously fired in a standby mode with full operation limited to a maximum of 3,000 hours per year. No add-on emissions control devices are employed by the emissions unit.

{Permitting note(s): The emissions unit is regulated under NSPS - 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994; Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with less than 250 Million Btu per Hour Heat Input, New and Existing Units. The Auxiliary Boiler began operation in April, 1996.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum process/operation rate heat input (higher heating value) is 120.0 million Btu per hour.

[Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **B.25.**

[Rule 62-297.310(2), F.A.C.]

B.3. Methods of Operation. Fuels. This emissions unit fires only very low sulfur No. 2 distillate oil.

[Rules 62-212.400, 62-212.410, and 62-213.410, F.A.C.; and, PSD-FL-194]

B.4. Hours of Operation.

a. Standby Mode: This emissions unit may operate in a standby mode continuously, i.e., 8,760 hours/year.

b. Non-Standby Modes: The hours of operation for this emissions unit shall not exceed 3,000 hours/year.

[Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-194(A)]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.5. Sulfur Dioxide. Sulfur dioxide emissions shall not exceed 0.80 pound per million Btu heat input.

[40 CFR 60.42b(a) & (j)]

B.6. Sulfur Dioxide. Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in 40 CFR 60.45b(c) or 40 CFR 60.45b(d), and following the monitoring procedures as described in 40 CFR 60.47b(a) or 40 CFR 60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in 40 CFR 60.49b(r).

[40 CFR 60.42b(j)]

B.7. Sulfur Dioxide - Sulfur Content. The maximum sulfur content of the very low sulfur No. 2 fuel oil shall not exceed 0.05 percent, by weight. See specific condition **B.52**.

[PSD-FL-194]

B.8. Sulfur Dioxide. Compliance with the emission limits and the fuel oil sulfur limits are determined on a 30-day rolling average basis.

[40 CFR 60.42b(e)]

B.9. Particulate Matter. Particulate matter emissions shall not exceed 43 ng/J (0.10 pound per million Btu) heat input.

[40 CFR 60.43b(b)]

B.10. Visible Emissions. Visible emissions shall not exceed 20 percent opacity (six-minute average), except for one six-minute period per hour during which opacity shall not exceed 27 percent.

[40 CFR 60.43b(f); and, PSD-FL-194(A)]

B.11. Nitrogen Oxides. Emissions of nitrogen oxides (expressed as NO₂) shall not exceed 0.10 pound per million Btu heat input.

[40 CFR 60.44b(a); and, PSD-FL-194(A)]

B.12. Nitrogen Oxides. Compliance with the emission limits is determined on a 30-day rolling average basis.

[40 CFR 60.44b(i)]

Excess Emissions

B.13. Sulfur Dioxide. The sulfur dioxide emission limitations apply at all times, including periods of startup, shutdown and malfunction.
[40 CFR 60.42b(g)]

B.14. Particulate Matter and Opacity. The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.
[40 CFR 60.43b(g)]

B.15. Nitrogen Oxides. The nitrogen oxide standards apply at all times, including periods of startup, shutdown, or malfunction.
[40 CFR 60.44b(4)]

B.16. Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

B.17. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

Monitoring of Operations

B.18. Determination of Process Variables.

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.19. Sulfur Dioxide. The owner or operator shall determine compliance with the fuel sulfur limit of specific condition **B.7.** by using method ASTM D 2880-71, or the latest edition.
[PSD-FL-194]

B.20. Particulate Matter. The test methods for particulate matter are as follows:

- (1) Method 3B is used for gas analysis when applying Method 5 or Method 17.
- (2) Method 5 or Method 17 shall be used to measure the concentration of particulate matter as follows:
 - (i) Method 5 shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and
 - (ii) Method 17 may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160°C (320°F).
- (3) Method 1 is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.
- (4) For Method 5, the temperature of the sample gas in the probe and filter holder is monitored and maintained at 160°C (320°F).
- (5) For determination of particulate matter emissions, the oxygen or carbon dioxide sample is obtained simultaneously with each run of Method 5 or Method 17 by traversing the duct at the same sample location.
- (6) For each run using Method 5 or Method 17, the emission rate expressed in nanograms per joule heat input is determined using:
 - (i) The oxygen or carbon dioxide measurements and the particulate matter measurements obtained under this section,
 - (ii) The dry basis F factor, and
 - (iii) The dry basis emission rate calculation procedure contained in Method 19 (appendix A).

[40 CFR 60.46b(d)(1) - (6)]

B.21. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C.
[40 CFR 60.46b(d)(7); and, PSD-FL-194]

B.22. Nitrogen Oxides. The test method for nitrogen oxides shall be EPA Method 7, 7A, 7C, 7D, or 7E, incorporated by reference in Chapter 62-297, F.A.C.
[PSD-FL-194]

B.23. Nitrogen Oxides. The owner or operator of the affected facility shall upon request determine compliance with the nitrogen oxides standard through use of a 30-day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emissions reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.
[40 CFR 60.46b(e)(4)]

B.24. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

B.25. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

B.26. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

B.27. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit. [Rule 62-297.310(4), F.A.C.]

B.28. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

B.29. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Auxiliary Boiler shall be stack tested for visible emissions and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of NO_x CEMs may be used in lieu of the required annual EPA Reference Method 7, 7A, 7C, 7D, or 7E for NO_x as long as all of the requirements of Rule 62-297.310, F.A.C., are met.

Auxiliary Boiler Required Testing

Nitrogen Oxides (NO_x) - Initial Only*

Sulfur Dioxide (SO₂), %Sulfur - Monthly Composite

Particulate Matter (PM) - Initial Only*

Visible Emissions (VE) – Annually

* Pollutants do not have a potential to emit 100 tons per year or more

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours in a federal fiscal year.
 4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.
 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; and, SIP approved]

B.30. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-297.310(7)(a)4., F.A.C.]

{Permitting note: Any operational mode where liquid fuel(s) are burned are used to determine the annual hours of operation while burning liquid fuel(s).}

Continuous Monitoring Requirements

B.31. Sulfur Dioxide. The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the emission monitoring requirements of 40 CFR 60.47b if the owner or operator obtains fuel receipts as described in 40 CFR 60.49b(r).

[40 CFR 60.45b(j) and 40 CFR 60.47b(f)]

B.32. Particulate Matter. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system for measuring opacity of emissions discharged to the atmosphere and record the output of the system.

[40 CFR 60.48b(a)]

B.33. Nitrogen Oxides. The owner or operator of an affected facility subject to the nitrogen oxides standards under 40 CFR 60.44b shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system.

[40 CFR 60.48b(b)]

B.34. Nitrogen Oxides. The continuous monitoring system shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

[40 CFR 60.48b(c)]

B.35. Nitrogen Oxides. The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by 40 CFR 60.48b(b) and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(b). At least 2 data points must be used to calculate each 1-hour average.

[40 CFR 60.48b(d)]

B.36. Nitrogen Oxides. For affected facilities combusting oil, the span value for nitrogen oxides is 500 ppm.
[40 CFR 60.48b(e)(2)]

B.37. Nitrogen Oxides. When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring system, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.
[40 CFR 60.48b(f)]

Recordkeeping and Reporting Requirements

B.38. The owner or operator of an affected facility shall record and maintain records of the amount of fuel combusted during each day and calculate the annual capacity factor for the fuel for each calendar quarter. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
[40 CFR 60.49b(d)]

B.39. For facilities subject to the opacity standard under 40 CFR 60.43b, the owner or operator shall maintain records of opacity.
[40 CFR 60.49b(f)]

B.40. Nitrogen Oxides. The owner or operator of an affected facility subject to the nitrogen oxides standards shall maintain records of the following information for each steam generating unit operating day:

- (1) Calendar date.
- (2) The average hourly nitrogen oxides emission rates (expressed as NO₂) (ng/J or lb/million Btu heat input) measured or predicted.
- (3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
- (4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.
- (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including the reasons for not obtaining sufficient data and a description of corrective actions taken.
- (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

- (7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.
- (8) Identification of the times when pollutant concentration exceeded full span of the continuous monitoring system.
- (9) Descriptions of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.
- (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR 60 Appendix F, Procedure 1.
[40 CFR 60.49b(g)]

B.41. Excess Emissions. The owner or operator of any affected facility in any category listed in paragraphs (1) or (2) below is required to submit excess emission reports for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.

- (1) Any affected facility subject to the opacity standards under 40 CFR 60.43b(e) or to the operating parameter monitoring requirements under 40 CFR 60.13(I)(1).
- (2) Any affected facility that is subject to the nitrogen oxides standard under 40 CFR 60.44b, and that
 - (i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or
 - (ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under 40 CFR 60.48b(g)(1) or steam unit operating conditions under 40 CFR 60.48b(g)(2).
- (3) For the purpose of 40 CFR 60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f).
- (4) For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emission rate, as determined under 40 CFR 60.46b(e), which exceeds the applicable emission limits in 40 CFR 60.44b.
[40 CFR 60.49b(h)]

B.42. The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under 40 CFR 60.48b shall submit a quarterly report containing the information recorded under 40 CFR 60.49b(g). All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.
[40 CFR 60.49b(i)]

B.43. The owner or operator of any affected facility subject to the sulfur dioxide standards under 40 CFR 60.42b shall submit quarterly reports to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.
[40 CFR 60.49b(j)]

B.44. The owner or operator of any affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under 40 CFR 60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in 40 CFR 60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Quarterly reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the preceding quarter.

[40 CFR 60.49b(r)]

~~**B.45.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.~~

B.45. Excess emissions report: If excess emissions occur due to a malfunction, the owner or operator shall notify DEP's Southwest District within (1) working day of identification of the excess emissions; the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident.

[Rule 62-210.700(6), F.A.C.]

B.46. All recorded data shall be maintained on file by the Source for a period of five years.

[Rule 62-213.440, F.A.C.]

B.47. Submit to the Department a written report of emissions in excess of emission limiting standards for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rules 62-213.440, F.A.C.]

B.48. Test Reports.

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.

(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.

5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.

6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.

7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.

8. The date, starting time and duration of each sampling run.

9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.

10. The number of points sampled and configuration and location of the sampling plane.

11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.

12. The type, manufacturer and configuration of the sampling equipment used.

13. Data related to the required calibration of the test equipment.

14. Data on the identification, processing and weights of all filters used.

15. Data on the types and amounts of any chemical solutions used.

16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.

17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

18. All measured and calculated data required to be determined by each applicable test procedure for each run.

19. The detailed calculations for one run that relate the collected data to the calculated emission rate.

20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

B.49. Records of the hours of non-standby operation of the auxiliary boiler will be kept for purposes of periodic monitoring.

[Applicant agreement with EPA on January 22, 1999]

Miscellaneous Requirements.

B.50. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.

[40 CFR 60.2; and, Rule 62-204.800(7)(a), F.A.C.]

B.51. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

B.52. Sulfur Content of Fuel. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent, by weight. Compliance shall be demonstrated by testing for sulfur content of the fuel oil in the storage tanks once per day when firing oil. Testing for fuel oil heating value shall also be conducted on the same schedule. See specific condition **B.7.**

[PSD-FL-194]

B.53. The permittee shall comply with the requirements contained in Appendix 40 CFR 60, Subpart A, attached to this permit.

[Rule 62-204.800(7)(d), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection C. This section addresses the following emissions unit(s).

<u>E.U.</u>	<u>Brief Description</u>
<u>ID No.</u> -004	Sulfuric Acid Plant

The sulfuric acid plant takes a sulfur gas stream from the solid fuel gasification plant's hot gas cleanup or cold gas cleanup systems and converts it to sulfuric acid using the double contact process. The sulfuric acid plant has a 15 million Btu per hour, propane fired, H₂S to SO₂ conversion furnace which vents to the atmosphere only during warm-up; and a 9 million Btu per hour, propane fired, non-contact SO₂ to SO₃ converter preheater which is vented to the atmosphere. The sulfuric acid plant has a maximum production rate of 77,640 tons per year of 100 percent sulfuric acid.

{Permitting note(s): The emissions unit is regulated under Rule 62-296.402, F.A.C., Sulfuric Acid Plants}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Permitted Capacity. Plant production shall not exceed 77,640 tons per year of 100 percent sulfuric acid.

[Rules 62-4.160(2), F.A.C. and 62-210.200(PTE), F.A.C.]

{Permitting note: The maximum hourly production rate indicated in the permit application is 8.90 tons per hour of 100 percent sulfuric acid.}

C.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition C.16.

[Rule 62-297.310(2), F.A.C.]

C.3. Methods of Operation. Fuels. The conversion furnace fires only propane.

[Rule 62-213.410, F.A.C.]

C.4. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.

[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.5. Visible Emissions. Visible emissions shall not exceed ten percent opacity.
[Rule 62-296.402(2)(a), F.A.C.]

C.6. Sulfur Dioxide. Sulfur dioxide emissions shall not exceed four pounds per ton of 100 percent acid produced.
[Rule 62-296.402(2)(b), F.A.C.]

C.7. Acid Mist. Acid mist shall not exceed 0.15 pound per ton of 100 percent acid produced.
[Rule 62-296.402(2)(c), F.A.C.]

Excess Emissions

C.8. Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Best operational practices shall be documented in writing and submitted to the Department.
[Rule 62-210.700(1), F.A.C.]

C.9. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

C.10. Determination of Process Variables.

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

C.11. The owner or operator shall observe and record a quantified visible emission observation, six minutes in duration, for the sulfuric acid plant on a daily basis, for the purpose of periodic monitoring.

[Applicant agreement with EPA on January 22, 1999]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.12. Visible Emissions. The test method for visible emissions shall be DEP Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. See specific condition **C.12**. [Rule 62-296.402(3)(a), F.A.C.]

C.13. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
 - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
 - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value. [Rule 62-297.401, F.A.C.]

C.14. Acid Mist/Sulfur Dioxide. The test method for acid mist shall be EPA Method 8, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department. The minimum sample volume for the EPA Method 8 test shall be ~~4030~~ dry standard cubic feet. The test method for sulfur dioxide shall be EPA Method 6C, incorporated and adopted by reference in Chapter 62-297, F.A.C., or an alternative method approved by the Department.
[Rule 62-296.402(3)(b), F.A.C.; and, applicant request received November 25, 2002]

C.15. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

C.16. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

C.17. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

C.18. Applicable Test Procedures.

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached to this permit.
[Rule 62-297.310(4), F.A.C.]

C.19. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.
[Rule 62-297.310(6), F.A.C.]

C.20. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Sulfuric Acid Plant shall be stack tested for visible emissions and sulfur dioxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30).

Sulfuric Acid Plant Required Testing

Sulfur Dioxide (SO₂) – Annually

Sulfuric Acid Mist (H₂SO₄) - Initial Only. VE will be used as a surrogate.

Visible Emissions (VE) – Annually

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units

that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

- a. Visible emissions, if there is an applicable standard;
- b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
- c. Each NESHAP pollutant, if there is an applicable emission standard.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

Record keeping and Reporting Requirements

C.21. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

[Rule 62-210.700(6), F.A.C.]

C.22. All recorded data shall be maintained on file by the Source for a period of five years.

[Rule 62-213.440, F.A.C.]

C.23. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
 1. The type, location, and designation of the emissions unit tested.
 2. The facility at which the emissions unit is located.
 3. The owner or operator of the emissions unit.
 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 8. The date, starting time and duration of each sampling run.
 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.
 13. Data related to the required calibration of the test equipment.
 14. Data on the identification, processing and weights of all filters used.
 15. Data on the types and amounts of any chemical solutions used.
 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

18. All measured and calculated data required to be determined by each applicable test procedure for each run.

19. The detailed calculations for one run that relate the collected data to the calculated emission rate.

20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

C.24. Record, in tons, the daily production of 100 percent sulfuric acid for purposes of periodic monitoring.

[Applicant agreement with EPA on January 22, 1999]

Section III. Emissions Unit(s) and Conditions.

Subsection D. This section addresses the following emissions unit(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-005	Solid Fuel Handling System

The solid fuel handling system consists of a bottom unloading station where water/surfactant spray is applied to the incoming fuel as needed for dust control. The system also includes enclosed or covered conveying systems, rubber skirted drop points from bins, two fuel silos with an associated bag house, a fuel surge bin with an associated bag house, and two rod mill crushers for slurry production.

Solid fuel is received by truck and is ~~bottom~~ unloaded to the fuel unloading bin. Fugitive emissions are controlled by water spray with surfactant applied at the unloading bin as needed. Fuel is conveyed via enclosed or covered conveyor from the unloading bin to the fuel storage silos. The transfer points from the bin to the belts are rubber skirted. Fugitive emissions from the fuel silos are controlled by an associated bag house. Fuel is then reclaimed from the silos via enclosed or covered conveyors to the surge bin inside the slurry preparation building. Fugitive emissions from the surge bin are controlled by an associated bag house. Fuel and water are then mixed in the rod mill crushers to produce a coal slurry.

{Permitting note(s): The emissions unit is regulated under 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants; and, Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD)}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.1. Methods of Operation. Particulate matter emissions from the handling of solid fuels shall be controlled by enclosing or covering all solid fuel storage, conveyors and conveyor transfer points. Water sprays or chemical wetting agents and stabilizers shall be applied to uncovered storage piles, roads, handling equipment, etc. during dry periods, as necessary, to all facilities to maintain the opacity specified in specific condition D.3.

[Rule 62-213.410, F.A.C.; and, PSD-FL-194(E)]

D.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.

[Rule 62-210.200(PTE), F.A.C.]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.3. Visible Emissions. Visible emissions shall be less than or equal to five percent opacity. [PSD-FL-194(A)]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.4. Visible Emissions. The test method for visible emissions shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C. The test shall be conducted annually. [PSD-FL-194 and 40 CFR 60.254(b)(2)]

D.5. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. The Solid Fuel Handling System shall be tested for visible emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30).

Solid Fuel Handling System

Visible Emissions – Annually

(a) **General Compliance Testing.**

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate;

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply. [Rule 62-297.310(7), F.A.C.; and, SIP approved]

Recordkeeping and Reporting Requirements

D.6. All recorded data shall be maintained on file by the Source for a period of five years. [Rule 62-213.440, F.A.C.]

D.7. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
1. The type, location, and designation of the emissions unit tested.
 2. The facility at which the emissions unit is located.
 3. The owner or operator of the emissions unit.
 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.

8. The date, starting time and duration of each sampling run.
 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 10. The number of points sampled and configuration and location of the sampling plane.
 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 12. The type, manufacturer and configuration of the sampling equipment used.
 13. Data related to the required calibration of the test equipment.
 14. Data on the identification, processing and weights of all filters used.
 15. Data on the types and amounts of any chemical solutions used.
 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
- [Rules 62-213.440 and 62-297.310(8), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection E. This section addresses the following emissions unit(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-006	Solid Fuel Gasification System

The solid fuel gasification system converts solid fuel {coal or blends of up to 60 percent petroleum coke (petcoke) and 40 percent bituminous coal} into syngas for the purpose of electric generation.

{Permitting note(s): The emissions unit is regulated under Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD)}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

E.1. Permitted Capacity. Solid fuels input to the solid fuel gasification plant shall consist of coal or coal/petroleum coke blends containing a maximum of 60.0 percent petroleum coke by weight. ~~The maximum input of solid fuels to the solid fuel gasification plant shall not exceed 2,325 tons per day, on a dry basis. The maximum weight of the petroleum coke blended shall not exceed 1,395 tons per day, on a dry basis. The maximum sulfur content of the blended fuel shall not exceed 3.5 percent by weight.~~

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-194(E)]

E.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year.

[Rule 62-210.200(PTE), F.A.C.]

Monitoring of Operations

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

~~**E.3.** Compliance with the solid fuel sulfur content standard of 3.5 percent, by weight, will be determined by sampling each unique fuel blend prior to gasification by the owner/operator or the vendor as follows: using appropriate ASTM methods such as, ASTM D2013-72, ASTM D3177-75, and ASTM D4239-85, or latest ASTM edition methods. See Specific Condition E.1. [40 CFR 60.335(d); and, PSD-FL-194(E)]~~

~~**E.4.** Record daily the actual solid fuel input to the emissions unit, in tons per day. [Rule 62-213.440(1)(b), F.A.C.]~~

Recordkeeping and Reporting Requirements

E.5. Recordkeeping. Written or electronic records verifying that the coal/petroleum coke blends input to the solid fuel gasification system have not exceeded the 60.0 percent ~~(1,395 tons per day)~~ maximum petroleum coke by weight ~~limit and the blended fuel sulfur content of 3.5 percent by weight limit~~ specified by Specific Condition E.1., shall be maintained and submitted to the Department's Southwest District Office with each annual report. These records shall be generated ~~each time a new shipment of coal/petroleum coke fuel is received or solid fuel is gasified.~~ for each batch of coal/petroleum coke blend to be gasified. (e.g., a batch usually consists of a barge shipment).

[PSD-FL-194(E)]

E.6. All recorded data shall be maintained on file by the Source for a period of five years.
[Rule 62-213.440, F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection F. This section addresses the following emissions unit(s).

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-009	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-2
-010	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-3

The emissions units are two dual-fuel, nominal 165 megawatts General Electric Model PG7241 FA simple cycle combustion turbines. The units are equipped with dry low-NO_x combustors and wet injection capability. Pipeline quality natural gas is the primary fuel and No. 2 fuel oil serves as the backup fuel.

{Permitting note(s): The emissions units are regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated February 24, 1994. The simple cycle combustion turbine CTG-2 began operation in June, 2000 and simple cycle combustion turbine CTG-3 began operation in April, 2002.}

The following conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

F.1. Permitted Capacity. The maximum heat input rates, based on the lower heating value (LHV) of each fuel to each unit at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 1,600 million Btu per hour (MMBtu/hr) when firing natural gas, nor 1,800 MMBtu/hr when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions provided to the Department of Environmental Protection (DEP), shall be utilized for these corrections.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-263]

F.2. Methods of Operation. Fuels. Only pipeline natural gas or maximum 0.05 percent sulfur fuel oil No. 2 or superior grade of distillate fuel oil shall be fired in this unit. {Note: The limitation of this specific condition is more stringent than the NSPS sulfur dioxide limitation and thus assures compliance with 40 CFR 60.333 and 60.334}
[Rules 62-210.200(PTE), 62-212.400, and 62-212.410, F.A.C.; and, PSD-FL-263]

F.3. Hours of Operation. The maximum hours of operation for each unit are 4,380 hours per year on natural gas and 750 hours per year on fuel oil.
[Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-263]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

F.4. Nitrogen Oxides:

- **While firing Natural Gas:** The emission rate of NO_x in the exhaust gas shall not exceed 10.5 ppm @15% O₂ on a 24-hr block average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 59 pounds per hour (at ISO conditions) and 9 ppmvd @15% O₂ to be demonstrated by the initial “new and clean” GE performance stack test.

Notwithstanding the applicable NO_x limit during normal operation, reasonable measures shall be implemented to maintain the concentration of NO_x in the exhaust gas at 9 ppmvd at 15% O₂ or lower. Any tuning of the combustors for Dry Low NO_x operation while firing gas shall result in initial subsequent NO_x concentrations of 9 ppmvd @15% O₂ or lower.

- **While firing Fuel oil:** The concentration of NO_x in the exhaust gas shall not exceed 42 ppmvd at 15% O₂ on the basis of a 3-hr average as measured by the continuous emission monitoring system (CEMS). In addition, NO_x emissions calculated as NO₂ shall not exceed 319 lb/hr (at ISO conditions) and 42 ppmvd @15% O₂ to be demonstrated by stack test.

The permittee shall develop a NO_x reduction plan when the hours of oil firing reach the allowable limit of 750 hours per year. This plan shall include a testing protocol designed to establish the maximum water injection rate and the lowest NO_x emissions possible without affecting the actual performance of the gas turbine. The testing protocol shall set a range of water injection rates and attempt to quantify the corresponding NO_x emissions for each rate and noting any problems with performance. Based on the test results, the plan shall recommend a new NO_x emissions limiting standard and shall be submitted to the Department’s Bureau of Air Regulation and Compliance Authority for review. If the Department determines that a lower NO_x emissions standard is warranted for oil firing, this permit shall be revised.

[PSD-FL-263]

F.5. Sulfur Dioxide. SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content less than 2 grains per 100 standard cubic foot) or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur for 750 hours per year per unit. Emissions of SO₂ (at ISO conditions) shall not exceed 9.2 lb/hr (natural gas) and 98.1 lb/hr (fuel oil) as measured by applicable compliance methods.

[PSD-FL-263]

F.6. Visible Emissions. VE emissions shall serve as a surrogate for PM/PM10 emissions and shall not exceed 10 percent opacity.
[PSD-FL-263]

F.7. Volatile Organic Compounds. The concentration of VOC in the stack exhaust gas with the combustion turbine operating on natural gas shall exceed neither 1.4 ppmvw nor 2.8 lb/hr (ISO conditions) and neither 3.5 ppmvw nor 7 lb/hr (ISO conditions) while operating on oil to be demonstrated by initial stack test using EPA Method 18, 25 or 25A.
[PSD-FL-263]

F.8. Carbon Monoxide. During the first 12 months after initial start up, the concentration of CO in the stack exhaust gas shall exceed neither 15 ppmvd nor 48 lb/hr (at ISO conditions) while firing gas and neither 33 ppmvd nor 106 lb/hr (at ISO conditions) while firing oil based on stack test. Thereafter, these limits will be revised and lowered to 12 ppmvd and 38 lb/hr (at ISO conditions) while firing gas and 20 ppmvd and 65 lb/hr (at ISO conditions). The permittee shall demonstrate compliance with these limits by stack test using EPA Method 10.
[PSD-FL-263]

Excess Emissions

F.9. Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration. Operation below 50% output shall be limited to 2 hours per unit cycle (breaker closed to breaker open).
[Rule 62-210.700(1), F.A.C.; and, PSD-FL-263]

F.10. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. These emissions shall be included in the 24-hr average for NO_x.
[Rule 62-210.700(4), F.A.C.; and, PSD-FL-263]

{Permitting note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

Monitoring of Operations

F.11. At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

~~F.12. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO_x emissions shall operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the Administrator. See specific condition F.31.~~

~~[40 CFR 60.334(a)]~~

F.13. The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall demonstrate compliance with the NO_x 24-hr block average and/or 3-hr block average emission standards in lb/hr specified in Condition F.4 via CEMs data to satisfy these monitoring requirements. In the event CEMs data are not available, ~~the~~ owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined ~~on each occasion that fuel is transferred to the storage tank from any other source.~~ from a monthly fuel oil composite sample prepared from daily fuel oil samples. Nitrogen oxide CEMs may be used to determine the fuel bound nitrogen content of fuel oil combusted in gas turbines subject to this requirement as well as vendor fuel oil analyses may be used to satisfy the sulfur content monitoring requirements. See specific Condition F.31. for nitrogen and F.34 for sulfur.

(2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b). ~~See specific condition F.31. for only nitrogen.~~

[40 CFR 60.334(b)(1) & (2)]

F.14. Determination of Process Variables.

(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in

conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

F.15. To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired.
[40 CFR 60.335(a)]

~~**F.16.** When determining compliance with 40 CFR 60.332, Subpart GG—Standards of Performance for Stationary Gas Turbines, the monitoring device of 60.334(a) shall be used to determine the fuel consumption and the water to fuel ratio necessary to comply with the permitted NO_x standard at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer. See specific condition **F.31**.
[40 CFR 60.335(e)(2)]~~

F.17. The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 as follows:
c. U.S. EPA Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO_x emissions shall be determined at each of the load conditions specified in 40 CFR 60.335(c)(2).
[40 CFR 60.335(c)(3)]

F.18. Continuous compliance with the NO_x emission limits: Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at least 15 minutes apart. Valid hourly emission rates shall not include periods of start up, shutdown, or malfunction unless prohibited by Rule 62-210.700 F.A.C. These excess emissions periods shall be reported as required in specific conditions **F.10**, and **F.38**. [Rules 62-4.070 and 62-210.700, F.A.C., 40 CFR 75; and, BACT]

All continuous monitoring systems (CEMS) shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average.
[40 CFR 60.13; and, PSD-FL-263]

F.19. Initial (I) performance tests (for both fuels) shall be performed on each unit while firing natural gas as well as while firing oil. Initial tests shall also be conducted after any modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment such as change or tuning of combustors. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on each unit as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing:

EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).

EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).

EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40 CFR 60 Subpart GG and (I, A) short-term NO_x BACT limits (EPA reference Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test data may be used to demonstrate compliance for annual test requirements).

EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.
[PSD-FL-263]

F.20. Compliance with CO emission limit: An initial test for CO shall be conducted concurrently with the initial NO_x test, as required. The initial NO_x and CO test results shall be the average of three valid one-hour runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NO_x CEMS required pursuant to 40 CFR 75.
[PSD-FL-263]

F.21. Compliance with the SO₂ emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO₂. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule or natural gas supplier data may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1998 version).
[40 CFR 60.335(d) and PSD-FL-263]

F.22. Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate and no annual testing is required.
[PSD-FL-263]

F.23. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

F.24. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

F.25. Applicable Test Procedures.

(a) **Required Sampling Time.**

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) **Minimum Sample Volume.** Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

- (c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- (d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.
- (e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

F.26. The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.
 [Rule 62-297.310(6), F.A.C.]

F.27. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required. Unit Number 2 and 3 shall be stack tested for visible emissions, carbon monoxide, sulfur dioxide, and nitrogen oxide emissions. Each test shall be conducted annually during each federal fiscal year (October 1 – September 30). The annual calibration RATA associated with the use of NO_x CEMs may be used in lieu of the required Method 20 for NO_x as long as all of the requirements of Rule 62-297, F.A.C., are met.

Unit No. 2 and 3 Required Testing

<u>Fuel - Natural Gas:</u>	<u>Fuel – No.2 Oil:</u>
<u>Nitrogen Oxides (NO_x) – Annually</u>	<u>Nitrogen Oxides (NO_x) - Annually</u>
<u>Sulfur Dioxide (SO₂) – Annually</u>	<u>Sulfur Dioxide (SO₂) - Annually</u>
<u>Volatile Organic Compounds (VOC) - Initial Only</u>	<u>Volatile Organic Compounds (VOC) - Initial Only (F.19)</u>
<u>Carbon Monoxide (CO) - Initial Only*</u>	<u>Carbon Monoxide (CO) - Initially Only*</u>
<u>Visible Emissions (VE) – Annually</u>	<u>Visible Emissions (VE) - Annually</u>
<u>Sulfur Dioxide (SO₂), gr/100 scf Sulfur - Annually</u>	<u>Sulfur Dioxide (SO₂), % Sulfur - Monthly Composite</u>

* Pollutants do not have a potential to emit 100 tons per year or more

- (a) General Compliance Testing.
 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
- a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7), F.A.C.; and, SIP approved]

F.28. Operating Rate During Testing. Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.
[PSD-FL-263]

Monitoring Requirements

F.29. Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from these units. Upon request from EPA or DEP, the CEMS emission rates for NO_x on these Units shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

[PSD-FL-263]

F.30. CEMS for reporting excess emissions: Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). See specific conditions **F.36.** and **F.37.** Periods when NO_x emissions (ppmvd @ 15% oxygen) are above the BACT standards, listed in specific condition **F.4.**, shall be reported to the DEP Southwest District within one working day (verbally) followed up by a written explanation not later than three (3) working days (alternatively by facsimile within one working day).

F.30(a). Alternate Standards and CEMs Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such incidents.

- a. **Load Operation:** Excluding startup, shutdown, and malfunction, the turbine is allowed up to two hours of operation below 50% base load per unit cycle (breaker closed to breaker open).
- b. **CEMs Data Exclusion:** For the following identified operational periods, NO_x emissions data may be excluded from the 24-hr block average and/or 3-hr block average in accordance with the corresponding requirements.
 - (1) **Startup, Shutdown, and Malfunction:** Periods of gas turbine startup, shutdown, or malfunction data may be excluded from the 24-hr block average and/or 3-hr block compliance average due to all such episodes. Gas turbine startup is the commencement of operation of a gas turbine that has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, or pollution control device imbalances, which may result in elevated emissions. Shutdown is the process of bringing a gas turbine off line and ending fuel combustion. A malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

If a CEMs reports emissions in excess of a NO_x standard, excluding periods specified on Condition F.30(a), the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.

[PSD-FL-263]

F.31. CEMS in lieu of Water to Fuel Ratio: The NO_x CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). ~~The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (e)(2) (1998 version) will be replaced by the 40 CFR 75 certification tests of the NO_x CEMS.~~

[PSD-FL-263]

F.32. Continuous Monitoring Certification and Quality Assurance Requirements: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.

[PSD-FL-263]

F.33. Natural Gas Monitoring Schedule: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:

- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.

The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).

- Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[PSD-FL-263]

F.34. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d). Alternatively, the permittee may use the monthly composite analysis to meet the provisions for determining the fuel sulfur content and the data collected by the NO_x CEMs to meet the provisions for determining the fuel nitrogen content. -See specific conditions **F.13.** and **F.31.**, for only nitrogen.

[PSD-FL-263]

Record Keeping and Reporting Requirements

F.35. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:

a. *Nitrogen oxides.* Any ~~one-hour~~ period during which the NO_x 24-hr block average and/or 3-hr block average ~~water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test, as monitored by the CEMs during oil or natural gas firing exceeds 42 ppmvd (319 lb/hr) or 10.5 ppmvd (59 lb/hr), respectively. Each report shall include the NO_x 24-hr block average and/or 3-hr block average emission rate as measured by the CEMs ~~water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a) and any other requirement in Condition F.36 through F.38.~~ See specific condition **F.31.**~~

[Rule 62-296.800, F.A.C.; and, 40 CFR 60.334(c)(1)]

F.36. The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the

end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
 - (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- [40 CFR 60.7(c)(1), (2), (3), & (4)]

F.37. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

[40 CFR 60.7(d)(1) & (2)]

F.38. Excess Emissions Report: If excess emissions occur due to malfunction (for greater than 2 hours in a 24-hr period), the owner or operator shall notify DEP's Southwest District within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Following the NSPS format, 40 CFR 60.7 Subpart A, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards. See specific condition **F.4.**

[Rule 62-210.700(6), F.A.C. and PSD-FL-263]

F.39. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- (b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
 - 1. The type, location, and designation of the emissions unit tested.
 - 2. The facility at which the emissions unit is located.
 - 3. The owner or operator of the emissions unit.
 - 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 - 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 - 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 - 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 - 8. The date, starting time and duration of each sampling run.
 - 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 - 10. The number of points sampled and configuration and location of the sampling plane.
 - 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 - 12. The type, manufacturer and configuration of the sampling equipment used.
 - 13. Data related to the required calibration of the test equipment.
 - 14. Data on the identification, processing and weights of all filters used.
 - 15. Data on the types and amounts of any chemical solutions used.
 - 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 - 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
 - 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
 - 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
 - 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

Miscellaneous Requirements.

F.40. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.

[40 CFR 60.2; and, Rule 62-204.800(7)(a), F.A.C.]

F.41. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

F.42. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the DEP Southwest District as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations.

[PSD-FL-263]

F.43. ARMS Emissions Units 009 and 010. Direct Power Generation, consisting of a nominal 165 megawatt simple cycle combustion turbine-electrical generator, shall comply with all applicable provisions of 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s).

[PSD-FL-263]

F.44. The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN and wet injection systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions consistent with normal operation and maintenance practices and shall be maintained to minimize NOx emissions and CO emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas.

[Rules 62-4.070, and 62-210.650, F.A.C.; and, PSD-FL-263]

Section IV. This section is the Acid Rain Part.

Operated by: Tampa Electric Company
ORIS code: 7242

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions unit listed below is regulated under Acid Rain, Phase II.

E.U.

<u>ID No.</u>	<u>Brief Description</u>
-001	260 MW Combined Cycle Combustion Turbine
-009	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-2
-010	Nominal 165 Megawatt Simple Cycle Gas Turbine CTG-3

A.1. The Phase II permit application submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit must comply with the standard requirements and special provisions set forth in the application listed below:

- a. DEP Form No. 62-210.900(1)(a), dated 7-1-95
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

A.2. Sulfur dioxide (SO₂) allowance allocations requirements for each Acid Rain unit are as follows:

<u>E.U. ID No.</u>	<u>EPA ID</u>	<u>Year</u>	2000	2001	2002	2003	2004
-001	**1	SO₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*
-009	002	SO₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*
-010	003	SO₂ allowances, under Table 2 or 3 of 40 CFR Part 73	0*	0*	0*	0*	0*

* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.

2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.

3. Allowances shall be accounted for under the Federal Acid Rain Program.
[Rule 62-213.440(1)(c), F.A.C.]

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62- 214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, F.A.C., Fast-Track Revisions of Acid Rain Parts.
[Rules 62-213.413 and 62-214.370(4), F.A.C.]

A.5. Comments, notes, and justifications:
None

ATTACHMENT E

AUGUST 7, 2000 CORRESPONDENCE



November 17, 2000

Mr. Scott M. Sheplak, P.E.
Administrator, Title V Section
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via FedEx
Airbill No. 7904 0207 2581

Re: Tampa Electric Company (TEC) – Polk Power Station
Request for Alternative Sampling Procedure
DEP File No. 1050233-05-AC (PSD-FL-263A)
DEP File No. 1050233-06AV

Dear Mr. Sheplak:

Tampa Electric Company has received your letter dated August 23, 2000 regarding the request for an alternative sampling procedure for fuel bound nitrogen. After reviewing the document attached to that letter identifying alternative sampling methods that EPA has routinely approved, TEC is considering several of those options. This evaluation requires an extensive review of both the advantages and disadvantages of each alternative. TEC has not yet completed this review and to that end, the Company requests a 60-day extension of the 90-day response period required by 62-4.055(1) to ensure that the review is completed in a thorough manner.

If you have any questions, please feel free to telephone Shannon Todd or me at (813) 641-5125.

Sincerely,

Mark J. Hornick
General Manager/Responsible Official
Polk Power Station

EP\gm\SKT211

c: Mr. Al Linero - FDEP
Mr. Edward Svec - FDEP
Mr. Jerry Kissel - FDEP SW
Mr. Buck Oven, FDEP

bc: R. Burkhardt
M.C. Duff
M.R. Perkins
D.A. Smith
AP 6
C 2.1

r: A.S. Autry
G.M. Nelson
R. Calderon
J.J. Hunter
P.L. Shell
T.B. Wenning
J.T. Woodlee

CERTIFICATION OF RESPONSIBLE OFFICIAL

Based on information and belief formed after reasonable inquiry, I certify that all statements made in these reports are true, accurate and complete.

Mark J. Hornick
(Signature of Responsible Official)

11/17/00
(Date)

Name: Mark J. Hornick
(Type or Print)

Title: General Manager, Polk Power Station
(Type or Print)



Department of Environmental Protection

Best Available Copy

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 23, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark J. Hornick
General Manager - Polk Power Station
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601-0111

**THIS IS A COPY OF
THE LETTER
PREVIOUSLY SENT
TO YOU. THE
ENCLOSURE IS
ATTACHED.**

Re: DEP File No. 1050233-05-AC (PSD-FL-263A)
and DEP File No. 1050233-06-AV
Requirement to Sample Fuel Oil for Fuel Bound Nitrogen

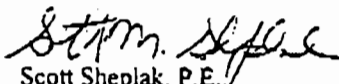
Dear Mr. Hornick:

The Department has reviewed your letter request dated August 7, 2000 requesting changes to the Title V Permit and PSD-FL-263 for the Polk Power Station. This request will require Department permits. Rule 62-4.050, F.A.C. requires that all applications for Department permits must be submitted on forms approved by the Department, in quadruplicate, and be certified by a professional engineer registered in the State of Florida.

It appears requested change will require a relaxation to a federal standard established by 40 CFR 60, Subpart GG. The EPA has recently issued a letter where certain specific, routine requests for alternative testing and monitoring procedures are automatically granted. We have attached a copy of this letter for your information. If the requested change does not meet one of the specific alternatives which can be approved by the Department, the Department will be unable to process your request until you have applied for and have been granted an approved alternate testing or monitoring proposal from EPA Region 4.

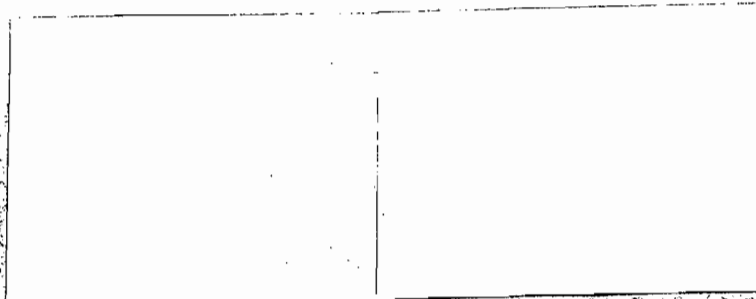
Additionally, permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If you have any questions regarding this matter, please call Edward J. Svec at 850/921-8985.

Sincerely,


Scott Sheplak, P.E.
Administrator
Title V Section

Attachment

cc: Bill Thomas, DEP SWD





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 25 2000

4APT-ARB

Ronald W. Gore, Chief
Alabama Department of Environmental
Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2059

OPTIONAL FORM 99 (7-90)

SUBJ: Approval of Routine Alternative Testing and Monitoring Procedures for Combustion
Turbines Regulated Under New Source Performance Standards

Dear Mr. Gore:

Over the past year, Region 4 has received numerous requests for approval of alternative testing and monitoring procedures for combustion turbines (CTs) regulated under 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines). In the process of reviewing these requests, we have identified several alternatives that are routinely approved. Although these alternatives are being approved on a regular basis, the U.S. Environmental Protection Agency (EPA) Region 4 has typically required that all alternative testing and monitoring proposals be submitted for case-by-case reviews. Since the approval of certain alternatives has become so routine, we have concluded that submitting them to Region 4 for review consumes regional, state, and local agency resources and slows down the approval process without providing a corresponding environmental benefit. Specific alternatives for which we have found this to be the case are described in detail in the remainder of this letter, and due to their routine nature, it will no longer be necessary for you to submit such alternative testing or monitoring proposals to Region 4 for case-by-case review or approval. These (alternatives) may be approved by your Agency without additional input from Region 4.

Nitrogen monitoring requirement for gas-fired CTs

Under the provisions for 40 C.F.R. §60.334(b)(2), owners and operators of CTs who do not have intermediate bulk storage for the fuel fired in their turbines are required to conduct daily monitoring to determine the sulfur and nitrogen content of the fuel combusted. Under the terms of the enclosed August 14, 1987, custom fuel monitoring policy issued by EPA Headquarters, the nitrogen monitoring requirement for pipeline quality natural gas-fired turbines can be waived because this fuel does not contain fuel-bound nitrogen and any free nitrogen that it may contain does not contribute appreciably to the formation of nitrogen oxides (NO_x) emissions. Based upon the precedent set in the August 1987 custom fuel monitoring policy, the requirement to monitor the nitrogen content of pipeline quality natural gas can be waived for all Subpart GG turbines.

Internet Address (URL) • <http://www.epa.gov>

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Sulfur monitoring for gas-fired CTs

EPA's August 1987 custom fuel monitoring policy also provides details regarding a procedure that owners and operators of natural gas-fired turbines can follow in order to obtain approval to reduce their sulfur analysis frequency from a daily to a semiannual basis. Under this policy, owners and operators of affected facilities can obtain approval for a semiannual monitoring frequency by collecting and analyzing samples under the following schedule:

1. Samples must initially be collected and analyzed twice a month for six months. If six months of bi-monthly sampling and analysis indicate that sulfur concentrations are well below the applicable standard with low variability, the sampling frequency can be reduced to a quarterly basis.
2. If six quarters of quarterly sampling and analysis indicate that sulfur concentrations are well below the applicable standard with low variability, the sampling frequency can be reduced to a semiannual basis.
3. If any analyses indicate noncompliance with the applicable sulfur limit of 0.8 weight percent in 40 C.F.R. §60.333(b), samples must be collected and analyzed on a weekly basis while the custom fuel monitoring schedule is re-examined.
4. If there is a substantial change in fuel quality, samples must be collected and analyzed on a weekly basis while the custom fuel monitoring schedule is re-examined.

In addition to situations where the owner or operator of a CT regulated under Subpart GG proposes a custom fuel monitoring schedule that is identical to the one outlined in EPA's August 1987 policy, there are two other natural gas sulfur content monitoring alternatives that will not have to be submitted to Region 4 for review. One of these alternatives involves allowing an owner or operator of a new facility to use a semiannual monitoring frequency for natural gas sulfur content immediately upon startup if they can provide the results of bi-monthly and quarterly analyses conducted in accordance with the first and second steps of the schedule outlined above. Region 4 has approved this type of alternative on several occasions. The analytical data needed to justify a waiver of the bi-monthly and quarterly sampling steps may be available when a new unit is added to a source where ongoing monitoring is being conducted for other CTs at the site or when the company's gas supplier can provide previous analytical results for samples whose sulfur content is representative of the fuel that it will be supplying for the new CT.

The other natural gas sulfur monitoring alternative that will not have to be submitted to Region 4 for case-by-case reviews involves situations in which the owner or operator of a CT subject to Subpart GG proposes that the gas samples be collected at a place in the gas transmission line either upstream or downstream of the site where the CT is located. In several previous determinations Region 4 has indicated using such sampling locations is acceptable provided that no new gas enters the transmission line between the sampling location and the

affected facility in question. The basis for approval of an alternate sampling location in this situation is that if no new gas enters the transmission line between the offsite sampling location and the CT, the sulfur content of the samples collected and analyzed will be representative of that burned in the affected facility.

Use of continuous emission monitors for NO_x

The monitoring provisions in 40 C.F.R. §60.534(c)(1) use operating parameters (water-to-fuel injection rates and fuel nitrogen content) to identify periods of NO_x excess emissions. Since many of the turbines being installed today are fired with pipeline quality natural gas and do not rely on water injection control, the monitoring required in Subpart GG will not provide any useful information about excess emissions for such turbines. According to the enclosed May 31, 1994, EPA Headquarters' determination, owners and operators of CTs that do not use water injection for NO_x control must propose a method for monitoring excess emissions under Subpart GG. One approach that many CT owners and operators rely on to address this requirement is to use NO_x continuous emission monitoring systems (CEMS) that have been installed and certified under other requirements such as the acid rain monitoring rule in 40 C.F.R. Part 75 or through conditions in a Prevention of Significant Deterioration (PSD) permit. The enclosed March 12, 1993, EPA Headquarters' determination contains detailed requirements when CEMS are used as an alternative means of monitoring NO_x emissions under Subpart GG. Requests from owners and operators proposing to follow these procedures would not have to be submitted to Region 4 for review. In cases where a CEMS is used to satisfy the NO_x monitoring requirements under Subpart GG, the requirement to collect and analyze oil samples for nitrogen content under the provisions in 40 C.F.R. §60.534(b) can also be waived.

Correcting NO_x data to International Standards Organization conditions

One provision in the March 12, 1993, Headquarters' policy regarding the use of NO_x CEMS for which Region 4 has routinely approved alternatives involves the requirement that the continuous monitor be capable of calculating emission rates corrected to International Standards Organization (ISO) standard day conditions (288 degrees Kelvin, 60 percent relative humidity, and 101.3 kilopascals of pressure). Since the testing provision in 40 C.F.R. §60.535(c)(1) requires that performance test results be corrected to ISO standard day conditions, CEMS results must also be expressed on this same basis in order to conclusively identify periods of excess emissions. In many cases today, however, CTs are subject to NO_x limits under PSD that are considerably more stringent than those in Subpart GG, and typically these PSD limits are not expressed on an ISO-corrected basis. Depending on the type of turbine, the applicable NO_x standard in Subpart GG is either 75 parts per million (ppm) or 150 ppm, and limits contained in PSD permits being issued today are often less than 10 ppm. Based upon the fact that these limits are more stringent than those in Subpart GG, New Source Performance Standard (NSPS) compliance would generally be a concern only in cases where a source is in violation of the corresponding PSD limit. On this basis, Region 4 routinely waives the requirement to correct CEMS results to ISO standard day conditions on a continuous basis provided that the source

owner or operator maintains records of the data (ambient temperature, ambient humidity, and combustor inlet pressure) that would enable it to make the correction at the request of EPA or a state or local agency to which the authority to implement Subpart GG has been delegated. Based upon the previous approvals granted by Region 4, requests that CEMS not be required to make ISO corrections on a continuous basis when units are subject to PSD NO_x limits that are more stringent than those in Subpart GG would not have to be submitted to Region 4 for case-by-case reviews. One condition imposed on any such approvals, however, must be that the CT owner or operator keeps records of the data needed to make the correction.

Multiple load testing requirements

Under the provisions of 40 C.F.R. §60.335(c)(2), owners and operators of CTs subject to Subpart GG must conduct NO_x performance testing at four different loads across the unit operating range. There are two circumstances under which it would be acceptable for initial performance testing to be conducted at a single operating load. One circumstance which is addressed in the enclosed EPA Region 2 determination dated May 19, 1994, would be one in which a turbine is subject to a permit condition which restricts the unit to operating at a single load level. In this situation, a single load test provides adequate assurance of compliance, and nothing would be gained by conducting testing for three additional load levels at which the turbine is not intended to operate.

Although we are not aware of many CTs that are restricted to operating at a single load level, one common situation where a waiver of the requirement to conduct a multiple load performance test on a CT would be one in which a CEMS is used to satisfy the NO_x monitoring requirements in the rule. One reason for conducting a multiple load test on a CT is to determine the water injection rate needed to maintain NO_x compliance across the unit's normal operating range. Since it is difficult to predict which operating load will represent "worst case" conditions for a CT, conducting a multiple load test is often necessary in order to provide an adequate level of compliance assurance even for turbines that do not use water injection for NO_x control. For CTs equipped with NO_x CEMS, however, the monitors will provide credible evidence regarding the unit's compliance status on a continuous basis following the initial test, and the level of compliance assurance provided in this case is sufficient to justify approval of requests that initial performance testing be allowed at a single operating load.

Initial NO_x performance testing options for CEMS-equipped units

In addition to approving requests that single-load testing be accepted for units equipped with NO_x CEMS, Region 4 has also allowed companies to use certified monitors to collect the data needed for demonstrating initial compliance. The NO_x test method specified for Subpart GG under the provisions in 40 C.F.R. §60.335(c)(3) is EPA Method 20, and once a NO_x CEMS has been certified, the main difference between using the monitor or Method 20 to collect the data for the initial performance test involves the number of traverse points at which the sampling is conducted. Although a CEMS extracts the sample from a single point instead of the eight

traverse points required under Method 20, part of the monitor certification process involves verifying that the CEMS probe is collecting a sample from a representative location in the stack. Therefore, Region 4 has allowed owners and operators of Subpart GG turbines to use certified CEMS to collect data for initial NO_x performance testing on a number of occasions. Conditions for these approvals have been that compliance be based on a minimum of three test runs representing a total of at least three hours of data and that the CEMS be calibrated in accordance with the procedure in Section 6.2.3 of Method 20 following each run. Provided that owners and operators agree to these conditions, it will not be necessary to submit future proposals for using NO_x CEMS to conduct initial performance testing on Subpart GG turbines to Region 4 for a case-by-case review.

Another initial testing alternative that we know has recently been approved in at least one other EPA Region involves demonstrating compliance with the emission standard in Subpart GG using the data collected during the relative accuracy test audit (RATA) performed on a NO_x CEMS. Although no CT owner or operator has made a specific proposal of this type in Region 4, it would be acceptable to us since the amount of sampling conducted during the RATA (a minimum of nine 21-minute test runs) using EPA reference test methods provides enough representative emissions data to determine the CT's compliance status. Therefore, if you receive any proposals to determine NO_x compliance for a CT using the reference method test data collected during a RATA conducted on the unit's CEMS, it will not be necessary to submit the proposal to Region 4 for a case-by-case review.

Alternative sampling procedures for oil storage tanks

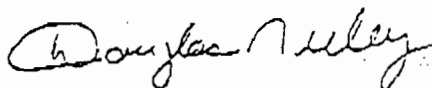
The monitoring provisions for units that have bulk storage tanks require that fuel samples be collected and analyzed each time that oil is added to the tank [see 40 C.F.R. §60.534(b)(1)]. In several recent determinations, Region 4 has approved alternatives to these requirements for owners and operators that use large bulk storage tanks to supply oil to their CTs. For facilities that use tanker trucks to fill large storage tanks, collecting a sample each time oil is added to the tank has the potential to be burdensome due to the fact that a large number of samples might have to be analyzed, and our goal when approving alternative sampling procedures for such tanks has been to reduce the sampling and analysis burden while ensuring that the results of the sampling provide adequate assurance of compliance. One of the alternatives which Region 4 has approved involves situations where a facility owner or operator has multiple storage tanks and switches between the tanks used to supply oil for its CTs. In situations where a tank is isolated from the CTs while it is being filled, we have approved an alternative procedure in which sampling is not required until the owner or operator has finished filling the tank. The basis for the approval of this alternative is that, if the tank is isolated from the CTs while it is being filled, a sample collected once the tank is full will be representative of the oil supplied to the CTs when the tank is put back into service.

Region 4 has also allowed owners and operators that receive oil in tanker trucks to use vendor analyses to satisfy the oil nitrogen and sulfur monitoring requirements under Subpart GG. In order for this option to be acceptable, the sulfur and nitrogen content of all the oil delivered to the source must meet the applicable limits. The sulfur content limit promulgated at 40 C.F.R. §60.533(b) is 0.8 weight percent, and according to 40 C.F.R. §60.534(c)(1), the nitrogen content limit is set using baseline conditions during a performance test. Allowing an owner or operator to monitor oil sulfur and nitrogen content using "as-delivered" samples instead of samples collected from its storage tank is acceptable if the sulfur and nitrogen content of all the oil delivered meets the applicable limits since the average sulfur and nitrogen content of the oil in the storage tank will meet the applicable limits by default under this scenario. Also, determining the nitrogen content of the oil burned in a CT is not necessary in cases where NO_x excess emissions are monitored using a CEMS.

In summary, this letter identifies several Subpart GG testing and monitoring alternatives that can be approved by your agency without additional input from Region 4. In the event that the owner or operator of a Subpart GG turbine proposes other testing or monitoring alternatives, the request(s) for approval should be forwarded to Region 4 for review. In the course of evaluating such additional requests, we may identify other alternatives that do not need to be submitted for Region 4 review because their approval becomes routine. If this occurs, we will notify you accordingly.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404) 562-9102.

Sincerely,



R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

Enclosures

- (1) August 14, 1987, EPA Headquarters custom fuel monitoring policy for Subpart GG turbines
- (2) May 31, 1994, EPA Headquarters determination regarding monitoring obligations for CTs that do not use water injection for NO_x control

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August 7, 2000

Mr. Clair Fancy
Florida Department of Environmental Protection
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Via Fed Ex
Airbill No. 7923 6108 7734

**Re: Tampa Electric Company – Polk Power Station Title V and PSD-FL-263
Requirement to Sample Fuel Oil for Fuel Bound Nitrogen**

Dear Mr. Fancy:

Specific Condition A.14 of the Polk Power Station Title V permit and Specific Condition 44 of PSD-FL-263 both require that Tampa Electric Company (TEC) sample distillate oil from the fuel tank each time that fuel is transferred to the tank. These conditions are both required by 40 CFR 60.334 which also allows for the development of custom schedules "based on the design and operation of the affected facility and the characteristics of the fuel supply."

Since Units 1 and 2 both employ water injection to control NOx when oil fired, and utilize CEMs to demonstrate NOx compliance, TEC feels that sampling distillate oil each time that it is transferred to the bulk storage tank is unnecessary. Rather, TEC proposes that sampling distillate oil and analyzing it for fuel bound nitrogen once per day on days that either unit operates on distillate oil would give the Department reasonable assurance that TEC is in compliance with all applicable NOx emission limits. This would also provide a better indication of the characteristics of the fuel burned, since the sample would be taken after the fuel was added to the tank. In addition, the fuel bound nitrogen content does not vary significantly over time, so analyzing fuel oil each time it is transferred to the tank seems unnecessary.

Polk Units 1 and 2 each draw fuel oil from the same tank and, when fired with distillate oil, each Unit consumes approximately 15,000 gallons of fuel per hour. Consequently, if each Unit is operating on distillate oil, the supply tank will need to be replenished at a rate of four truckloads per hour. If TEC is required to sample and analyze fuel oil each time that it is transferred to the tank, approximately one hundred samples will be required on days that Units 1 and 2 are both operating on distillate oil. TEC feels that this permit requirement is both unnecessary and burdensome.

Mr. Clair Fancy
August 7, 2000
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Therefore, TEC formally requests that Specific Condition A.14 of the Polk Power Station Title V permit and Specific Condition 44 of PSD-FL-263 be changed to read:


"The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60 Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined once each day that a unit operates on oil by sampling and analyzing the fuel in the tank."

TEC appreciates the cooperation of the Department in this matter. If you have any questions, please contact Shannon Todd or me at (813) 641-5125.

Sincerely,



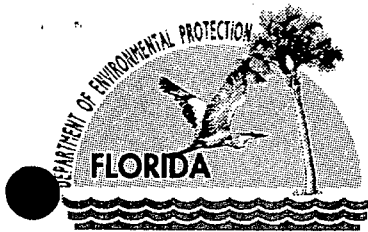
Mark J. Hornick
General Manager/Responsible Official 
Polk Power Station

EP\gm\SKT186

c: Mr. Al Linero - FDEP
Mr. Syed Arif - FDEP
Mr. Jerry Kissel - FDEP SW
Mr. Buck Oven, FDEP

bc: R. Burkhardt
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Department of Environmental Protection

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David B. Struhs
Secretary

August 23, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark J. Hornick
General Manager – Polk Power Station
Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601-0111

Re: DEP File No. 1050233-05-AC (PSD-FL-263A)
and DEP File No. 1050233-06-AV
Requirement to Sample Fuel Oil for Fuel Bound Nitrogen

Dear Mr. Hornick:

The Department has reviewed your letter request dated August 7, 2000 requesting changes to the Title V Permit and PSD-FL-263 for the Polk Power Station. This request will require Department permits. Rule 62-4.050, F.A.C. requires that all applications for Department permits must be submitted on forms approved by the Department, in quadruplicate, and be certified by a professional engineer registered in the State of Florida.

It appears requested change will require a relaxation to a federal standard established be 40 CFR 60, Subpart GG. The EPA has recently issued a letter where certain specific, routine requests for alternative testing and monitoring procedures are automatically granted. We have attached a copy of this letter for your information. If the requested change does not meet one of the specific alternatives which can be approved by the Department, the Department will be unable to process your request until you have applied for and have been granted an approved alternate testing or monitoring proposal from EPA Region 4.

Additionally, permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If you have any questions regarding this matter, please call Edward J. Svec at 850/921-8985.

Sincerely,

Scott Sheplak, P.E.
Administrator
Title V Section

Attachment

cc: Bill Thomas, DEP SWD