

Florida Department of Environmental Protection

Memorandum

TO: Joe Kahn, Division of Air Resource Management

THROUGH Trina Vielhauer, Bureau of Air Regulation

THROUGH: Syed Arif, New Source Review Section

FROM: Bruce Mitchell, New Source Review Section

DATE: December 8, 2008

SUBJECT: Project No. 0570039-040-AC
Tampa Electric Company
Big Bend Station
Two Simple Cycle Combustion Turbines-Generator Peaking Project

The Final Permit for this project is attached for your approval and signature, which authorizes the construction of two simple cycle combustion turbine (SCCT) peaking units, with one associated electrical generator, and one emergency diesel engine/generator set at the existing facility. The construction will take place at the existing Big Bend Station located at 13031 Wyandotte Road in Apollo Beach, Hillsborough County, Florida. The project results in a minor source air construction permit and was not subject to Prevention of Significant Deterioration (PSD) preconstruction review.

The Department distributed an Intent to Issue Permit package on November 19, 2008. The applicant published the Public Notice of Intent to Issue in The Tampa Tribune on November 21, 2008. The Department received the proof of publication on November 26, 2008. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed. No comments on the Draft Permit were received from the public, the Environmental Protection Commission of Hillsborough County or the applicant.

I recommend your approval of the attached Final Permit for this project.

Attachments

FINAL DETERMINATION

PERMITTEE

Tampa Electric Company
P.O. Box 111
Tampa, Florida 32178-0111

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation, New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Project No. 0570039-040-AC
Big Bend Station

This project authorizes the construction of two simple cycle combustion turbine (SCCT) peaking units, with one associated electrical generator, and one emergency diesel engine/generator set at the existing facility. The construction will take place at the existing Big Bend Station located at 13031 Wyandotte Road in Apollo Beach, Hillsborough County, Florida. The project results in a minor source air construction permit and was not subject to Prevention of Significant Deterioration (PSD) preconstruction review.

NOTICE AND PUBLICATION

The Department distributed an Intent to Issue Permit package on November 19, 2008. The applicant published the Public Notice of Intent to Issue in The Tampa Tribune on November 21, 2008. The Department received the proof of publication on November 26, 2008. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

COMMENTS

No comments on the Draft Permit were received from the public, the Environmental Protection Commission of Hillsborough County or the applicant.

CONCLUSION

The final action of the Department is to issue the permit as drafted and publicly noticed.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

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

Project No. 0570039-040-AC
Big Bend Station
Two Simple Cycle Combustion Turbine
Peaking Units

Authorized Representative:

Paul L. Carpinone, Director, Environmental Health and Safety

Tampa Electric Company operates the existing Big Bend Station in Hillsborough County located at 13031 Wyandotte Road in Apollo Beach, Florida. This final air construction permit authorizes the construction of two simple cycle combustion turbine (SCCT) peaking units, with one associated electrical generator, and one emergency diesel engine/generator set at the existing facility. This permit is issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida



Trina L. Vielhauer, Chief
Bureau of Air regulation

12/8/08

(Date)

TLV/sa/bm

NOTICE OF FINAL PERMIT

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Determination and the Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on 12/10/08 to the persons listed below.

Mr. Paul L. Carpinone, Tampa Electric Company (plcarpinone@tecoenergy.com)
Mr. David M. Lukcic, Tampa Electric Company (dmlukcic@tecoenergy.com)
Mr. Byron T. Burrows, Tampa Electric Company (btburrows@tecoenergy.com)
Mr. Andrew T. Nguyen, Tampa Electric Company (atnguyen@tecoenergy.com)
Mr. Thomas W. Davis, P.E., Environmental Consulting & Technology, Inc. (tdavis@ectinc.com)
Mr. Jerry Campbell, Hillsborough County Environmental Protection Commission (campbell@epchc.org)
Ms. Diana Lee, Hillsborough County Environmental Protection Commission (Lee@epchc.org)
Mr. Roger Zhu, Hillsborough County Environmental Protection Commission (Zhu@epchc.org)
Ms. Vickie Gibson, DEP-BAR (Victoria.Gibson@dep.state.fl.us) (for read file)

Clerk Stamp

FILED AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.



(Clerk)

12/10/08
(Date)



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:

Tampa Electric Company
Post Office Box 111
Tampa, Florida 33601-0111

Project No. 0570039-040-AC
Big Bend Station
Two Simple Cycle Combustion
Turbines-Generator Peaker Project
SIC No. 4911
Permit Expires December 31, 2010

Authorized Representative:

Mr. Paul L. Carpinone, Director, Environmental Health and Safety

PROJECT AND LOCATION

This permit authorizes the construction of two simple cycle combustion turbines (SCCT) with one associated electrical generator at the existing Big Bend Station. SCCT 4A and SCCT 4B will be coupled to one common generator having a nominal gross generation capacity of 62 megawatts (MW). Each SCCT will fire pipeline-quality natural gas and ultra low sulfur diesel fuel (ULSD). Each combustion turbine will operate only in the simple cycle mode. The existing facility is located at 13031 Wyandotte Road in Apollo Beach, Hillsborough County. The map coordinates are UTM Zone 17, 361.78 km East and 3075.10 km North.

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The project was processed in accordance with the requirements of Rule 62-212.400, F.A.C., the preconstruction review program for the Prevention of Significant Deterioration (PSD) of Air Quality. The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

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- Section II. Administrative Requirements
- Section III. Emissions Units Specific Conditions
- Section IV. Appendices

Joseph Kahn, Director
Division of Air Resource Management

12/10/2008
Effective Date

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

The Tampa Electric Company's Big Bend Station (Big Bend) is a nominal 2,028 MW existing electrical utility plant located in Apollo Beach, Florida. The facility produces electricity for distribution to the grid as a saleable product.

The regulated emissions units at Big Bend include the following: four steam boilers (Units Nos. 1 - 4); four steam turbines; three simple-cycle combustion turbines (SCCT Nos. 1 - 3); solid fuels, fly ash, limestone, gypsum, slag, and bottom ash storage and handling facilities, and fuel oil storage tanks. Units Nos. 1, 2, 3, and 4 have nominal maximum heat inputs of 4037, 3996, 4115 and 4330 million British thermal units (MMBtu) per hour, respectively. Units Nos. 1 - 4 are fired with coal and with petroleum coke (petcoke) in a mixture with coal up to 20.0% petcoke/ 80.0% coal (by weight), or a coal blended with coal residual generated from the Polk Power Station, or a coal/petcoke blend further blended with coal residual generated from the Polk Power Station. The SCCT are fired with No. 2 distillate fuel oil. In addition, there is a ship surface coating operation. The facility has emissions units that are Acid Rain Units and regulated under the Florida Electrical Power Plant Siting Act.

PROJECT DESCRIPTION

The project will consist of constructing one Pratt & Whitney Power Systems (PWPS) FT8-3® SwiftPac® aeroderivative CT-generator unit. It will be designated as SCCT 4A & SCCT 4B. SCCT 4A and SCCT 4B will be coupled to one common generator having a nominal gross generation capacity of 62 MW. Each SCCT will only operate in the peaking service mode for no more than 3,500 hours per year (hr/yr). Each SCCT will be fired with pipeline-quality natural gas (NG) and ultra low sulfur diesel fuel (ULSD). The NG shall contain no more than 2.0 grains of total sulfur per one hundred standard cubic feet (gr S/100 scf) and the ULSD shall contain a maximum sulfur content of 0.0015 percent (%), by weight. Each SCCT will utilize water injection to reduce the emissions of NOx and an oxidation catalyst to reduce the emissions of carbon monoxide (CO) and volatile organic compounds (VOC).

The project will also include the installation of one new Caterpillar 800 kilowatt (kW) emergency stationary reciprocating internal combustion engine (RICE)-generator set. Excluding emergency conditions, the new stationary RICE-generator set will be allowed to operate for approximately two hours per week (100 hr/yr) for routine testing and maintenance purposes. The new emergency stationary RICE will be fired with ULSD. Under this proposal, the projected maximum total ULSD fuel oil usage is 5,720 gallons per year (gal/yr) and entitles it to a categorical exemption in Rule 62-210.300(3)(a)35.d., F.A.C., One or More Emergency Generators Located Within a Single Facility, because it will burn only one fuel type and fire no more than 32,000 gal/yr.

SECTION I. GENERAL INFORMATION

NEW EMISSION UNITS

This permit authorizes construction and installation of the following new regulated emission units:

ARMS ID	Emission Unit (EU) Description
041	SCCT 4A with a common electric generator that it shares with SCCT 4B
042	SCCT 4B with a common electric generator that it shares with SCCT 4A

This permit also authorizes construction and installation of the following emissions unit that is exempt from construction permitting requirements, but certain new source performance standards may still apply. The emissions unit will be included in the Title V Air Operating Permit.

ARMS ID	EU Description
043	One Caterpillar 800 kW emergency RICE-generator set, which is a categorically exempt emissions unit in Rule 62-210.300(3)(a)35.d., F.A.C.

REGULATORY CLASSIFICATION

Title III: The facility is a major source of hazardous air pollutants (HAP).

Title IV: The facility has units subject to the Acid Rain provisions of the Clean Air Act. The new SCCT 4A and SCCT 4B will be subject to the Acid Rain provisions of the Clean Air Act.

Title V: The facility is a Title V or "Major Source of Air Pollution" in accordance with Rule 62-210.200(Definitions) and Chapter 62-213, F.A.C.

PSD: The facility is a PSD-major facility pursuant to Chapter 62-212, F.A.C.

New Source Performance Standards (NSPS): SCCT 4A and SCCT 4B (Emissions Units 041 and 042, respectively) are subject to 40 CFR 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines for which Construction is Commenced after February 18, 2005).

National Emissions Standards for Hazardous Air Pollutants (NESHAP): SCCT 4A and SCCT 4B are not subject to 40 CFR 63, Subpart YYYY (NESHAP for Stationary Combustion Gas Turbines) because the effectiveness of the regulations were stayed by the U.S. Environmental Protection Agency (EPA) on August 18, 2004, for diffusion flame gas-fired turbines – the type of turbines proposed for this project.

NESHAP: The caterpillar emergency RICE-generator set (Emissions Unit 043) is subject to 40 CFR 63, Subpart ZZZZ (NESHAP for New Stationary RICE) with a site-rating of more than 500 brake horsepower that commences construction after December 1, 2002. However, new stationary RICE that operate exclusively as emergency units are subject only to initial notification requirements.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A.	Citation Formats and Glossary of Common Terms
Appendix B.	General Conditions
Appendix C.	Common Conditions
Appendix D.	Standard Testing Requirements
Appendix E.	Standard Continuous Monitoring Requirements

SECTION I. GENERAL INFORMATION

Appendix F. NSPS Subpart A, General Provisions

Appendix G. NSPS Subpart KKKK, Requirements for Stationary Combustion Turbines

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; the draft permit package including the Department's Technical Evaluation and Preliminary Determination; publication and comments; and the Department's Final Determination.

SECTION II. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, operate or modify emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (Department), at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such documents shall also be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Hillsborough County Environmental Protection Commission (HCEPC) office. The mailing address of the HCEPC's Air Quality Division (AQD) is 3629 Queen Palm Drive, Tampa, Florida 33619. The AQD's telephone number is 813/627-2600 and facsimile number is 813/627-2660.
3. General Conditions: The permittee shall operate under the attached General Conditions listed in Appendix B of this permit. General Conditions are binding and enforceable pursuant to Chapter 403, F.S. [Rule 62-4.160, F.A.C.]
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S., and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C., and follow the application procedures in Chapter 62-4, F.A.C. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. Approval to construct shall become invalid if construction is not completed within a reasonable time. The Department may extend the expiration date upon a satisfactory showing that an extension is justified. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, 62-210.300(1) and 62-212.400(12), F.A.C.]
6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
7. Source Obligation:
 - a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
 - b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

SECTION II. ADMINISTRATIVE REQUIREMENTS

8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. This permit authorizes construction of the referenced facilities. [Chapters 62-210 and 62-212, F.A.C.]
9. Application for Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Department's Bureau of Air Regulation in Tallahassee and a copy to the Region 4 Office of the U.S. Environmental Protection Agency in Atlanta, Georgia. This permit does not specify the Acid Rain program requirements. These will be included in the Title V Air Operation Permit. [40 CFR 70; 40 CFR 72; and Chapter 62-213, F.A.C.]
10. Title V Air Operation Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V Air Operation Permit is required for regular operation of the permitted emission units. The permittee shall apply for and obtain a Title V operation permit in accordance with Rule 62-213.420, F.A.C. To apply for a Title V Air Operation Permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050 and 62-4.220, and Chapter 62-213, F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

The specific conditions of this subsection apply to the following emission units after construction is complete.

ARMS ID	Emission Unit Description
041	SCCT 4A with a common electric generator that it shares with SCCT 4B
042	SCCT 4B with a common electric generator that it shares with SCCT 4A

APPLICABLE STANDARDS AND REGULATIONS

1. **Emissions Unit Shutdowns for PSD Preconstruction Review Purposes:** Upon achieving commercial operation of SCCT 4A and SCCT 4B, existing CT Nos. 1, 2 and 3 shall be shutdown for purposes of PSD preconstruction new source review and credible emissions usage. Pursuant to the definitions at 40 CFR 72.2, commercial operation means “to have begun to generate electricity for sale, including the sale of test generation”. The Department and the Compliance Authority shall be sent notification in writing of the shutdown date of each emissions unit for documenting in the data base of the air resource management system (ARMS). [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
2. **NSPS Requirements:** Each SCCT shall comply with the applicable NSPS in 40 CFR 60 including: Subpart A (General Provisions) and Subpart KKKK (Standards of Performance for Stationary Combustion Turbines for which Construction is Commenced after February 18, 2005). See Appendix F for the NSPS Subpart A provisions and Appendix G for the NSPS Subpart KKKK provisions. Some separate reporting and monitoring may be required by the individual subparts. [Rule 62-204.800(7)(b), F.A.C.; and 40 CFR 60, Subparts A and KKKK]

EQUIPMENT DESCRIPTION

3. **SCCT 4A and SCCT 4B:** The permittee is authorized to install, operate and maintain one PWPS FT8-3® SwiftPac® aeroderivative CT-generator peaking unit. SCCT 4A and SCCT 4B will be coupled to one common generator having a nominal gross generation capacity of 62 MW. Each SCCT will be equipped with water injection to minimize NOx emissions and an oxidation catalyst to minimize CO and VOC emissions. Each SCCT will only be operated in the simple cycle mode. Each SCCT will be allowed to fire pipeline-quality natural gas (NG) and ultra low sulfur diesel fuel (ULSD). [Application; and Rules 62-210.200[Definitions-Potential to Emit (PTE)] and 62-4.070(3), F.A.C.]

CONTROL TECHNOLOGY

4. **Wet Injection:** The permittee shall install, adjust, operate, and maintain a water injection system to reduce NOx emissions from each SCCT. Prior to the initial emissions performance tests, the water injection system shall be adjusted to achieve the permitted NOx emissions standards. Thereafter, the water injection system shall be maintained and adjusted in accordance with the manufacturer’s recommendations or determined best practices to minimize emissions. [Applicant request and Rule 62-4.070(3), F.A.C.]
5. **Oxidation Catalyst:** The permittee shall install, operate, and maintain an oxidation catalyst system to reduce CO and VOC emissions from each SCCT. The system shall be maintained and operated in accordance with the manufacturer’s recommendations or determined best practices to minimize emissions. [Applicant request and Rule 62-4.070(3), F.A.C.]

PERFORMANCE REQUIREMENTS

6. **Hours of Operation:** SCCT 4A and SCCT 4B are allowed to operate in the peaking service mode for no more than 3,500 hr/calendar year each, including no more than 500 hr/calendar year each on ULSD. Any hour used to fire ULSD will decrease an hour that could have been used to fire NG. [Applicant request; and Rules 62-4.070(3), 62-210.200(Definitions-PTE) and 62-212.400(PSD), F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

7. Permitted Capacity: The maximum heat input rate of each SCCT is 342.7 MMBtu per hour when firing NG or 302.7 MMBtu when firing ULSD [based on 100% load with evaporative cooling, 59° F ambient temperature, 52° F compressor inlet air temperature, and the higher heating value (HHV) of the fuel]. Heat input rates will vary depending upon turbine characteristics, ambient conditions and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Application and design; and Rules 62-4.070(3) and 62-210.200(Definitions-PTE), F.A.C.]
8. Authorized Fuels: Each CT is allowed to fire NG and ULSD. The NG shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet (2.0 gr S/100 scf). The ULSD shall contain a maximum sulfur content of 0.0015 %, by weight. [Rules 62-210.200(Definitions-PTE) and 62-212.400(PSD), F.A.C.]
9. Simple Cycle Mode: Each CT shall operate only in the simple cycle mode not to exceed the permitted hours of operation allowed by this permit. This restriction is based on the permittee's request, which formed the basis of the PSD applicability and emission standards specified in this permit. For any request to convert these units to combined cycle operation by installing/connecting to heat recovery steam generators, including changes to the fuel or quantity related to combined cycle conversion that may cause an increase in short or long-term emissions, the permittee shall submit a full PSD permit application complete with a proposed best available control technology (BACT) determination as if the SCCT peaking units had never been built. [Rules 62-210.200(Definitions-PTE) and 62-212.400(PSD), F.A.C.]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

EMISSIONS AND TESTING REQUIREMENTS

10. Emission Standards: Emissions from each SCCT shall not exceed the following NSPS and State Implementation Plan (SIP) standards.

Pollutant	Fuel	Emission Standard ^e	Averaging Time	Compliance Method	Basis
NO _x ^a	NG	25.0 ppmvd @ 15% oxygen (O ₂) (NSPS) ^f	4-hr rolling avg ^g	CEMS	40 CFR 60.4320
		32.0 lb/hr/SCCT (SIP)	3 run avg.	Stack Test	Applicant requested Rule 62-4.070(3), F.A.C.
	ULSD	42.0 ppmvd @ 15% oxygen (O ₂) (SIP)	4-hr rolling avg	CEMS	Applicant requested Rule 62-4.070(3), F.A.C.
		51.3 lb/hr/SCCT (SIP)	3 run avg.	Stack Test	
	NG and ULSD	25.0 ppmvd @ 15% oxygen (O ₂) (NSPS) ^f or 42.0 ppmvd @ 15% oxygen (O ₂) (SIP)	4-hr rolling avg ^g	CEMS	40 CFR 60.4325
	CO ^b	NG	21.0 ppmvd @ 15% O ₂ (SIP)	3-hr rolling avg	CEMS
9.1 lb/hr/SCCT (SIP)			3 run avg.	Stack Test	
ULSD		5.1 ppmvd @ 15% O ₂ (SIP)	3-hr rolling avg	CEMS	Applicant requested Rule 62-4.070(3), F.A.C.
		2.1 lb/hr/SCCT (SIP)	3 run avg.	Stack Test	
Visible Emissions ^c		10 % Opacity (SIP)	6-minute block	Visible Emissions Test	Applicant requested Rule 62-4.070(3), F.A.C.
PM ^c		NG: 2.0 gr S/100 scf (SIP) ULSD: 0.0015% S content, by wt (SIP)	N/A	Recordkeeping	Vendor data of analyses
SO ₂ ^d	NG	NG: 2.0 gr S/100 scf (SIP)	N/A	Demonstration of fuel combusted and vendor data of analyses	Applicant requested 40 CFR 60.4330(a)(1)
		0.90 lb/MWh/SCCT gross output ^d (NSPS) or 0.060 lb/MMBtu/SCCT heat input ^d (NSPS)			40 CFR 60.4330(a)(2)
	ULSD	ULSD: 0.0015% S content, by wt (SIP)			Applicant requested 40 CFR 60.4330(a)(1)
		0.90 lb/MWh/SCCT gross output ^d (NSPS) or 0.060 lb/MMBtu/SCCT heat input ^d (NSPS)			40 CFR 60.4330(a)(2)

a. The permittee shall conduct initial and annual tests [Relative Accuracy Test Audit (RATA)] on each SCCT to demonstrate compliance with the short-term NO_x emission limits [ppmvd @ 15% O₂ and lb/hr (mass emissions)] per fuel type. Thereafter, continuous compliance shall be demonstrated with the 4-hour rolling average NO_x emission limits by data collected from the required continuous emissions monitoring system (CEMS). When firing ULSD, compliance with the SIP limit ensures compliance with the NSPS limit of 74 ppmvd @ 15% O₂. When firing both NG and ULSD, compliance with the NSPS limit is ensured by complying with either the NSPS limit,

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

for NG, or the SIP limit, for ULSD, depending on the contribution of the fuels of the total heat input: if the total heat input contribution is equal to or greater than 50 percent from NG, you must meet the corresponding limit for a NG-fired turbine when you are burning that fuel; similarly, when your total heat input contribution is greater than 50 percent from ULSD, you must meet the corresponding limit for ULSD for the duration of the time that you burn that particular fuel.

- b. The permittee shall conduct an initial test on each SCCT to demonstrate compliance with the short-term [ppmvd @ 15% O₂ and lb/hr (mass emissions)] CO emission limits per fuel type. Thereafter, continuous compliance shall be demonstrated with the 3-hour rolling average CO emission limits by data collected by the required CEMS. CO will be used as a surrogate for VOC emissions as a demonstration of good combustion.
- c. The sulfur fuel specification combined with the efficient combustion design and operation of the turbines should minimize PM emissions (PM emissions are a surrogate for PM₁₀ emissions) as well as visible emissions. No stack tests are required. Compliance with the fuel specifications, CO standards, and visible emissions standards shall serve as indicators of good combustion. *{Permitting Note: Maximum expected PM/PM₁₀ emissions from each turbine are approximately 2.5 and 7.5 lb/hr for NG and ULSD, respectively.}*
- d. The fuel sulfur specifications effectively limit the potential emissions of SO₂ (and essentially sulfuric acid mist). For compliance purposes, the permittee elected to demonstrate that the fuel combusted will not exceed the potential sulfur emissions of 0.060 lb SO₂/MMBtu heat input (see Appendix G of the permit). *{Permitting Note: Maximum expected SO₂ emissions from each turbine are approximately 1.9 lb/hr and 0.5 lb/hr for NG and ULSD, respectively.}*
- e. The mass emission rate standards are based on a turbine inlet temperature condition of 59 °F, evaporative cooling on, and using the HHV of the fuel. Mass emission rate may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.
- f. 40 CFR 60, Subpart KKKK as described in 40 CFR 60.4320(a).
- g. 40 CFR 60, Subpart KKKK as described in 40 CFR 60.4350(g).

{Permitting Note: In combination with the annual restriction on hours of operation, the above emissions standards effectively limit annual potential emissions from both gas turbines to: 16.5 tons/year of CO, 121.7 tons/year of NO_x, 11.3 tons/year of PM/PM₁₀, 6.6 tons/year of SO₂, 0.8 tons/year of SAM, and 4.7 tons/year of VOC.}

[Applicant requested; Rules 62-4.070(3), 62-210.200(Definitions-PTE) and 62-212.400(PSD), F.A.C.; and 40 CFR 60, Subpart KKKK]

11. **Unconfined Particulate Emissions:** During the construction period, unconfined PM emissions shall be minimized by dust suppressing techniques such as covering, confining, or applying water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
12. **Standard Testing Requirements:** See Appendix D (Standard Testing Requirements) of this permit for notification, testing, recordkeeping and reporting requirements regarding a performance test. [Rules 62-204.800 and 62-297.100, F.A.C.; Appendix D of this permit; and 40 CFR 60, Appendix A]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

13. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Methods for Determining Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content: These methods shall be performed as necessary to support other methods.
5	Method for Determining Particulate Matter Emissions
7E	Determination of NO _x Emissions from Stationary Sources (Instrumental)
6 or 6C	Determination of SO ₂ Emissions from Stationary Sources
8	Determination of SAM and SO ₂ Emissions from Stationary Sources
9	Visual Determination of Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography <i>{Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}</i>
19	Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxide Emissions Rates
20	Determination of NO _x , SO ₂ , and Diluent Emissions from Stationary Combustion Turbines
25A	Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

The methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the Administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to Rule 62-297.620, F.A.C. [Rule 62-204.800, F.A.C. and 40 CFR 60, Appendix A]

14. **Testing Requirements:** Initial and subsequent performance tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. [Rules 62-297.310(2) and (7)(a), F.A.C.; 40 CFR 60.8; and Appendix D of this permit]
15. **Initial Compliance Demonstration:** Initial compliance tests shall be conducted within 60 days after achieving the maximum production rate at which the units will be operated, but not later than 180 days after the initial startup. In accordance with the test methods specified in this permit, each turbine exhaust stack shall be tested for each fuel to demonstrate compliance with the emission limits for CO, NO_x and visible emissions. For each test run (including visible emissions tests), CO and NO_x emissions recorded by the required CEMS shall be reported. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8; and Appendix D of this permit]
16. **Annual Compliance Testing:** During each federal fiscal year (October 1st to September 30th), annual compliance tests for visible emissions shall be conducted. For each visible emissions test, emissions of CO and NO_x recorded by the CEMS shall also be reported. [Rules 62-297.310(7)(a) and (b), F.A.C. and Appendix D of this permit]
17. **Initial and Subsequent Compliance Demonstration for NO_x:** See 40 CFR 60.4400 and 4405 in Appendix G (NSPS Subpart KKKK Requirements for Stationary Combustion Turbines) of this permit for the initial and subsequent compliance demonstration for NO_x. [40 CFR 60.4400 and 60.4405; and Appendices A and G of this permit]

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

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18. Initial and Subsequent Compliance Demonstration for Sulfur: See 40 CFR 60.4415 in Appendix G (NSPS Subpart KKKK Requirements for Stationary Combustion Turbines) of this permit for the initial and subsequent compliance demonstration for SO₂. A one-time compliance test on one CT shall be conducted for SO₂ mass emissions in order to satisfy compliance with the mass limit and the quality of the NG and ULSD. Afterwards, the use of NG and ULSD in accordance with the permit and 40 CFR 60.4415 will be used as a surrogate for SO₂ emissions. [40 CFR 60.4415; Appendices A and G of this permit; and Rule 62-4.070(3), F.A.C.]
19. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 3-hour rolling average CO emissions standards and with the 4-hour rolling average NO_x emission standards based on data collected by the required CEMS. Within 45 days of conducting any RATA on a CEMS that represents the annual compliance test, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. If the RATA on a CEMS was not conducted as an annual compliance test, then the results can be submitted with the SIP Quarterly or Semiannual Report. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion, which also reduces emissions of PM. [Rules 62-4.070(3) and 62-297.310(7)(a) and (b), F.A.C.]
20. 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 shall 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. [Rule 62-297.310(7)(b), F.A.C.]

EXCESS EMISSIONS

{Permitting Note: Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS, NESHAP, or Acid Rain programs.}

21. Definitions: Rule 62-210.200(Definitions), F.A.C., defines the following terms.
 - a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
 - b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose.
 - c. *Malfunction* is defined as 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
22. Excess Emissions Allowed - SIP. See Appendix C (Common Conditions) of this permit. [Rule 62-210.700(1), F.A.C. and Appendix C of this permit]
23. Excess Emissions Prohibited - SIP. See Appendix C (Common Conditions) of this permit. [Rule 62-210.700(4), F.A.C. and Appendix C of this permit]
24. Allowable SIP CO and NO_x Data Exclusions: Provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized, CO and NO_x CEMS data collected during periods of startup, shutdown and malfunction may be excluded from the 3-hr rolling average and 4-hr rolling average, respectively, compliance demonstrations only in accordance with the following requirements. All periods of data excluded shall be consecutive for each such episode and only data obtained during the described episodes (startup, shutdown and malfunction) may be excluded. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

- a. *Startup*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 10 minutes of CEMS data shall be excluded for each gas turbine startup. For startups of less than 10 minutes in duration, only those minutes attributable to startup shall be excluded.
- b. *Shutdown*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than the first 10 minutes of CEMS data shall be excluded for each gas turbine shutdown. For shutdowns less than 10 minutes in duration, only those minutes attributable to shutdown shall be excluded.
- c. *Malfunction*: In accordance with the procedures described in the CEMS Data Requirements of this section, no more than 120 minutes of CEMS data shall be excluded in a 24-hour period for each gas turbine due to malfunctions. Within one (1) working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data.

The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report annual emissions for the Annual Operating Report. [Rules 62-4.070(3), 62-210.200, 62-210.370(3) and 62-210.700, F.A.C.]

25. Excess Emissions NSPS - NO_x: See 40 CFR 60.4350 and 4380 in Appendix G (NSPS Subpart KKKK Requirements for Stationary Combustion Turbines) of this permit. [40 CFR 60.4350 and 60.4380]
26. Excess Emissions NSPS - SO₂: See 40 CFR 60.4385 in Appendix G (NSPS Subpart KKKK Requirements for Stationary Combustion Turbines) of this permit. [40 CFR 60.4385]

CONTINUOUS EMISSIONS MONITORING SYSTEMS (CEMS) REQUIREMENTS

27. CEMS: The permittee shall install, calibrate, maintain and operate the diluent CEMS to measure CO₂ emissions and CEMS to measure and record the emissions of CO and NO_x from each gas turbine in a manner sufficient to demonstrate continuous compliance with the emission standards of this section. All continuous monitoring systems shall be installed and functioning within the required performance specification by the time of the initial performance tests.
 - a. *NO_x Monitor*: Each NO_x monitor shall be certified pursuant to the specifications of 40 CFR 75. Quality assurance procedures shall conform to the requirements of 40 CFR 75. The annual and required Relative Accuracy Test Audit (RATA) tests required for the NO_x monitor shall be performed using EPA Method 7E or 20 in 40 CFR 60, Appendix A.
 - b. *CO Monitor*: Each CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The annual and required RATA tests required for the CO monitor shall be performed using EPA Method 10 in 40 CFR 60, Appendix A, and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.
 - c. *SO₂ Monitoring*: SO₂ monitoring will be in accordance with 40 CFR 75, Appendix D requirements (using sulfur content and fuel flow rates).
 - d. *Diluent Monitor*: The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NO_x are monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

[Rules 62-4.070(3) and 62-297.520, F.A.C.; 40 CFR 75; and Appendix E of this permit]

28. **CEMS Data Requirements:** The CEMS shall be installed, calibrated, maintained and operated in the gas turbine stacks to measure and record the emissions of CO and NOx in a manner sufficient to demonstrate compliance with the CEMS-based emission limits of this section. The CEMS shall express the results in units of ppmvd corrected to 15% oxygen. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions to demonstrate compliance with the applicable NOx standards of 40 CFR 60, Subpart KKKK, Table 1. The permittee shall be in compliance with the terms and conditions contained in Appendix E, Standard Continuous Monitoring Requirements, of this permit. [Rule 62-4.070(3), F.A.C. and Appendix E of this permit]
29. **CEMS Annual Emissions Requirement:** The owner or operator shall use data from the NOx and CO CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C., Annual Operating Report. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit. [Rules 62-210.200(Definitions) and 62-210.370(3), F.A.C.]

REPORTING AND RECORDKEEPING REQUIREMENTS

30. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Standard Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C. and Appendix D of this permit]
31. **Monitoring of Capacity:** The permittee shall monitor and record the heat input of each CT on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown and malfunction). This shall be achieved through monitoring daily rates of consumption and heat content of each allowable fuel in accordance with the provisions of 40 CFR 75, Appendix D, and recording the data using a monitoring component of the CEMS required above. [Rule 62-4.070(3), F.A.C. and Appendix E of this permit]
32. **Monthly Operations Summary:** By the 15th calendar day of each month, the permittee shall record the following for each fuel in a written or electronic log for the combustion turbine for the previous month of operation: fuel consumption, hours of operation and the updated calendar year totals for each. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. [Rule 62-4.070(3), F.A.C.]
33. **Fuel Sulfur Records:** The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.
 - a. **Natural Gas Sulfur Limit:** Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. A representative sample shall be collected using ASTM D5287. Methods for determining the sulfur content of the natural gas shall be ASTM methods D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gaseous Processors Association Standard 2377, or more recent versions, or through provisions listed in 40 CFR 60, Subpart KKKK that allows alternate NG fuel sulfur monitoring.
 - b. **ULSD Fuel Sulfur Limit:** Compliance with the fuel sulfur limit for ULSD fuel shall be demonstrated by keeping each bill of lading report obtained from the vendor indicating the sulfur content, percent by weight, of the ULSD fuel being delivered. A representative sample shall be collected using ASTM D5287. Methods for determining the sulfur content of the ULSD fuel shall be ASTM methods D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gaseous Processors Association

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Standard 2377, or more recent versions, or through provisions listed in 40 CFR 60, Subpart KKKK that allows alternate sulfur monitoring for ULSD.

The above methods shall be used to determine the fuel sulfur content in conjunction with the provisions of 40 CFR 60.4415. [Rules 62-4.070(3) and 62-4.160(15), F.A.C.; 40 CFR 60.4415; and Appendix G of this permit]

34. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C., and in Appendix D (Standard Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C. and Appendix D of this permit]
35. CEMS RATA Reports: At least 15 days prior to conducting any RATA on a CEMS, the permittee shall notify the Compliance Authority of the schedule (letter, email, fax, or phone call). A summary of the RATA reports shall be provided upon written request of the Compliance Authority and in the SIP Excess Emissions Report as specified in specific condition 36. [Rule 62-4.070(3), F.A.C.]
36. Excess Emissions Reporting:
 - a. *Malfunction Notification*: If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority 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.
 - b. *SIP Excess Emissions Report*: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority of the following for each gas turbine using the NSPS format in 40 CFR 60.7(c), Subpart A: a summary of the 4-hour rolling average NOx compliance periods for the quarter; a summary of the 3-hour rolling average CO compliance periods for the quarter; a summary of NOx and CO data excluded for the quarter; a summary of any RATA tests performed during the quarter; and a summary of the CEMS systems monitor availability for the quarter.
 - (1) If four consecutive quarterly reports demonstrate compliance with the CEMS-based emissions standards, the reporting frequency may be reduced to semiannual reporting. As part of the fourth consecutive satisfactory quarterly report, the permittee shall provide written notification of its intent to reduce the reporting frequency to a semiannual basis. The notification shall include a statement that the units were in full compliance during the four consecutive quarters and that reporting will be reduced to a semiannual basis. Semiannual reports shall include above information required for each quarter in the semiannual period. The permittee shall continue to comply with all other record keeping and monitoring provisions.
 - (2) If reports are being submitted on a semiannual basis and a unit is not in compliance with the CEMS-based emissions standards, the permittee shall immediately (within one day of detection) notify the Compliance Authority of the compliance status and reestablish quarterly reporting beginning with the current quarter. If compliance is reestablished for four consecutive quarters, semiannual reporting may resume as specified above.
 - c. *NSPS Reporting*: For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under 40 CFR 60, Subpart KKKK, the owner or operator must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SCCT 4A and SCCT 4B

60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown and malfunction.

{Note: If there are no periods of excess emissions as defined in 40 CFR 60, Subpart KKKK, a statement to that effect may be submitted with the SIP Quarterly Report to suffice for the NSPS Semiannual Report.}

[Rules 62-4.070(3), 62-4.130, 62-204.800 and 62-210.700(6), F.A.C.; and 40 CFR 60.7 and 60.4375]

37. **Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility in accordance with Rule 62-210.370, F.A.C., and Appendix C (Common Conditions) of this permit. Annual operating reports shall be submitted to the Compliance Authority by May 1, 2009, for calendar year 2008, and April 1st thereafter. [Rule 62-210.370(3), F.A.C.]

SECTION IV. APPENDICES
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- Appendix A. Citation Formats and Glossary of Common Terms
- Appendix B. General Conditions
- Appendix C. Common Conditions
- Appendix D. Standard Testing Requirements
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- Appendix F. NSPS Subpart A, General Provisions
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SECTION IV. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number for that county
“001” identifies the specific permit project number
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor source federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (Department’s database)

BACT: best available control technology

Btu: British thermal units

CAM: compliance assurance monitoring

SECTION IV. APPENDIX A
CITATION FORMATS AND GLOSSARY OF COMMON TERMS

CEMS: continuous emissions monitoring system
cfm: cubic feet per minute
CFR: Code of Federal Regulations
CO: carbon monoxide
CO₂: carbon dioxide
COMS: continuous opacity monitoring system
DEP: *Department of Environmental Protection*
Department: Department of Environmental Protection
dscfm: dry standard cubic feet per minute
EPA: Environmental Protection Agency
ESP: electrostatic precipitator (control system for reducing particulate matter)
EU: emissions unit
F.A.C.: Florida Administrative Code
F.D.: forced draft
F.S.: Florida Statutes
FGR: flue gas recirculation
Fl: fluoride
ft²: square feet
ft³: cubic feet
gpm: gallons per minute
gr: grains
gr/dscf: grains per dry standard cubic feet
HAP: hazardous air pollutant
Hg: mercury
HHV: higher heating value
I.D.: induced draft
ID: identification
kPa: kilopascals
lb: pound
MACT: maximum achievable technology
MMBtu: million British thermal units
MSDS: material safety data sheets
MW: megawatt
NESHAP: National Emissions Standards for Hazardous Air Pollutants
NOx: nitrogen oxides

SECTION IV. APPENDIX A

CITATION FORMATS AND GLOSSARY OF COMMON TERMS

NSPS: New Source Performance Standards

O&M: operation and maintenance

O₂: oxygen

Pb: lead

PM: particulate matter

PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less

PSD: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

SAM: sulfuric acid mist

scf: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

SO₂: sulfur dioxide

TPH: tons per hour

TPY: tons per year

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

VOC: volatile organic compounds

SECTION IV. APPENDIX B

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S.. Such evidence

SECTION IV. APPENDIX B
GENERAL CONDITIONS

shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (applicable);
 - b. Determination of Prevention of Significant Deterioration (applicable); and
 - c. Compliance with New Source Performance Standards (applicable).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV. APPENDIX C

COMMON CONDITIONS

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

EMISSIONS AND CONTROLS

1. **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 permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; 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 or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) 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.]
4. **Excess Emissions Prohibited:** Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. **Excess Emissions - Notification:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Department or the appropriate Local Program 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.]
6. **VOC or OS Emissions:** No person shall 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), F.A.C.]
7. **Objectionable Odor Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. **General Visible Emissions:** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

{Permitting Note: Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any NSPS or NESHAP provision.}

RECORDS AND REPORTS

10. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. **Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(3), F.A.C.]

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Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

COMPLIANCE TESTING REQUIREMENTS

1. **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 two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
2. **Operating Rate During Testing:** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate 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 purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
3. **Calculation of Emission Rate:** For each emissions performance test, 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.]
4. **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:
 - (a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
 - (b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
 - (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 or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

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- c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.
- d. *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.]

5. 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.]

6. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department or its designee elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department or its designee and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
 - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
 - (2) The ports shall be capable of being sealed when not in use.
 - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
 - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
 - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

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d. *Work Platforms.*

- (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.

f. *Electrical Power.*

- (1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
- (2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

g. *Sampling Equipment Support.*

- (1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
 - (a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
 - (b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
 - (c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
- (2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.
- (3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

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

7. 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.*

1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.

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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 and/or solid fuel 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 sub-subparagraph 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) 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.
 6. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
 7. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
 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 or its designee, 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.
 10. An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. *Special Compliance Tests.* When the Department or its designee, 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 shall require the owner or operator of the emissions unit to conduct compliance tests which identify the

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nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department or its designee.

- 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 or its designee, 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 or its designee 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 paragraph 62-297.310(7)(b), F.A.C., shall apply.

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

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8. 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 or its designee on the results of each such test.
- b. The required test report shall be filed with the Department or its designee 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 or its designee 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.

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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.

[Rule 62-297.310(8), F.A.C.]

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STANDARD CONTINUOUS MONITORING REQUIREMENTS

The new SCCT peaking units SCCT 4A and SCCT 4B (EU-041 and 042, respectively) are subject to the following requirements for the new continuous emissions monitoring systems (CEMS) required for CO and NO_x emissions and CO₂ for diluent.

CEMS OPERATION PLAN

1. **CEMS Operation Plan:** The permittee shall create and implement a plan for the proper installation, calibration, maintenance, and operation of each CEMS required by this permit. The permittee shall submit the CEMS Operation Plan to the Bureau of Air Monitoring and Mobile Sources for approval prior to CEMS installation. The CEMS Operation Plan shall become effective 60 days after submittal or upon its approval. If the CEMS Operation Plan is not approved, the permittee shall submit a new or revised plan for approval. *{Permitting Note: The Department maintains both guidelines for developing a CEMS Operation Plan and example language that can be used as the basis for the facility-wide plan required by this permit. Contact the Emissions Monitoring Section of the Bureau of Air Monitoring and Mobile Sources at 850/488-0114.}* [Rule 62-4.070(3), F.A.C.]

MONITORS, PERFORMANCE SPECIFICATIONS AND QUALITY ASSURANCE

2. **Span Values and Dual Range Monitors:** The permittee shall set appropriate span values for the CEMS based on the emissions standards and range of operation. If necessary, the permittee shall install dual range monitors in accordance with the CEMS Operation Plan. [Rule 62-4.070(3), F.A.C.]
3. **Diluent Monitor:** If required by permit to correct the CEMS output to the oxygen concentrations specified in the applicable emissions standard, the permittee shall either install an oxygen monitor or install a CO₂ monitor and use an appropriate F-Factor computational approach. [Rule 62-4.070(3), F.A.C.]
4. **Moisture Correction:** If necessary, the permittee shall install a system to determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). [Rule 62-4.070(3), F.A.C.]
5. **Continuous Flow Monitor:** For compliance with mass emission flow rate standards, the permittee shall install a continuous flow monitor to determine the stack exhaust flow rate. The flow monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 6. Alternatively, the permittee may install a fuel flow monitor and use an appropriate F-Factor computational approach to calculate stack exhaust flow rate. *{Permitting Note: The CEMS Operation Plan will contain additional details and procedures for CEMS installation.}* [Rule 62-4.070(3), F.A.C.]
6. **Performance Specifications:** The permittee shall evaluate the “acceptability” of each CEMS by conducting the appropriate performance specification. CEMS determined to be “unacceptable” shall not be considered “installed” for purposes of meeting the timelines of this permit. For CO monitors, the permittee shall conduct Performance Specification 4 of 40 CFR 60, Appendix B. For NO_x monitors, the permittee shall conduct Performance Specification 2 of 40 CFR 60, Appendix B, or the applicable CEMS certification procedures of 40 CFR 75, Appendix A, Section 6. [Rule 62-4.070(3), F.A.C.; 40 CFR 60; and 40 CFR 75]
7. **Quality Assurance:** The permittee shall follow the quality assurance procedures of 40 CFR 60, Appendix F. For NO_x, the permittee may follow the applicable quality assurance requirements of 40 CFR 75, Appendix B. For CO, the required relative accuracy test audit (RATA) tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60. For NO_x, the RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. [Rule 62-4.070(3), F.A.C.; 40 CFR 60; and 40 CFR 75]

CALCULATION APPROACH FOR SIP COMPLIANCE

8. **CEMS for Compliance:** Once adherence to the applicable performance specification for each CEMS is demonstrated, the permittee shall use the CEMS to demonstrate compliance with the applicable emission standards as specified by this permit. [Rule 62-4.070(3), F.A.C.]
9. **CEMS Data:** Each CEMS shall monitor and record emissions during all operations and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. Unless otherwise specified in this permit, all data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs,

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calibration checks, zero adjustments, and span adjustments. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd corrected to 15% oxygen. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_x as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. [Rule 62-4.070(3), F.A.C.]

10. Operating Hours and Operating Days: For purposes of this Appendix, the following definitions shall apply. An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit. [Rule 62-4.070(3), F.A.C.]
11. Valid Hourly Averages: Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. Each hourly average value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.
- a. Hours that are not operating hours are not valid hours.
 - b. For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

[Rule 62-4.070(3), F.A.C.]

12. Calculation Approaches: The permittee shall implement the calculation approach specified by this permit for each CEMS, as follows:
- a. *Daily Averages*:
 - b. *Rolling 30-day Average*.
 - c. *4-Hour Rolling Average (NO_x)*: Compliance with the 4-hour rolling average shall be determined after each operating hour by calculating and recording the arithmetic average of all valid hourly averages for the previous 4 operating hours (compliance period).
 - d. *3-Hour Rolling Average (CO)*: Compliance with the 3-hour rolling average shall be determined after each operating hour by calculating and recording the arithmetic average of all valid hourly averages for the previous 3 operating hours (compliance period).
 - e. *Rolling 12-month Totals*:

[Rule 62-4.070(3), F.A.C.]

13. Minimum Valid Hours: At least one valid hourly average shall be used to calculate the emissions over any averaging period specified by this permit. One valid hourly average shall be sufficient to calculate the emissions over any averaging period. [Rule 62-4.070(3), F.A.C.]

MONITOR AVAILABILITY

14. Monitor Availability: Monitor availability shall be calculated on a quarterly basis for each emission unit as the number of valid hourly averages obtained by the CEMS, divided by the number of operating hours, times 100%. The monitor availability calculation shall not include periods of time where the monitor was functioning properly, but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit, or relative accuracy audits (RAA). Monitor availability for each CEMS shall be 95% or

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greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit. [Rule 62-4.070(3), F.A.C.]

EXCESS EMISSIONS

15. Definitions:

- a. *Excess Emissions* (under the Florida SIP) are defined as emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions which occur during startup, shutdown, or malfunction.
- b. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
- c. *Shutdown* means the cessation of the operation of an emissions unit for any purpose.
- d. *Malfunction* means 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.

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

16. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rules 62-210.700(4), F.A.C.]

17. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CO and NO_x CEMS emissions data may be excluded from the corresponding compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C.

- a. *Excess Emissions.* For purposes of SIP-based permit limits, excess emissions data collected during periods of startup and shutdown may be excluded from compliance calculations as allowed by the permit standards.
- b. *Limiting Data Exclusion.* If the compliance calculation using all valid CEMS emission data (as defined in this Appendix) indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.
- c. *Event Driven Exclusion.* The excess emissions must occur due to an underlying event (startup or shutdown). If there is no underlying event, then no data may be excluded.
- d. *Continuous Exclusion.* Data shall be excluded on a continuous basis per event. Data from discontinuous periods shall not be excluded for the same underlying event.
- e. *Reporting Excluded Data.* These procedures for excluding SIP-based excess emissions from compliance calculations are not necessarily the same procedures used for "excess emissions" as defined by federal rules. Semiannual reports required by this permit shall indicate the duration of data excluded from SIP compliance calculations as well as the number of excess emissions as defined in the applicable federal rules.

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.} [Rule 62-210.700(4), F.A.C.]

18. Notification Requirements: The permittee shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate non-compliance for a given averaging period. [Rule 62-4.070(3), F.A.C.]

SECTION IV. APPENDIX E
STANDARD CONTINUOUS MONITORING REQUIREMENTS

CALCULATING AND REPORTING ANNUAL EMISSIONS

19. CEMS for Calculating Annual Emissions: As defined by this Appendix, all valid data shall be used when calculating annual emissions.
- a. Annual emissions shall include data collected during startup, shutdown, and malfunction periods.
 - b. Annual emissions shall include data collected during periods when the emission unit is not operating, but emissions are being generated (for example, firing fuel to warm up a process for some period of time prior to the emission unit's "official" startup).
 - c. Annual emissions shall not include data from periods of time where the monitor was functioning properly but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit, or RAA. These periods of time shall be considered "missing data" for purposes of calculating annual emissions.
 - d. Annual emissions shall not include data from periods of time when emissions are in excess of the calibrated span of the CEMS. These periods of time shall be considered "missing data" for purposes of calculating annual emissions.
20. Accounting for Missing Data: All valid measurements collected during each hour shall be used to calculate a 1-hour block average that begins at the top of each hour. For each hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the permittee shall account for emissions during that hour using site-specific data to generate a reasonable estimate of the 1-hour block average.
21. Emissions Calculation: Annual emissions shall be calculated as the sum of all valid emissions occurring during the year.
22. Reporting Annual Emissions: The permittee shall use data from each required CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rules 62-210.370(3) and 62-212.300(1)(e), F.A.C. [Rule 62-4.070(3), F.A.C.]

SECTION IV. APPENDIX F
NSPS SUBPART A, GENERAL CONDITIONS

Emissions units subject to a New Source Performance Standards of 40 CFR 60 are also subject to the applicable requirements of Subpart A, General Provisions, including:

- § 60.1 Applicability.
- § 60.2 Definitions.
- § 60.3 Units and abbreviations.
- § 60.4 Address.
- § 60.5 Determination of construction or modification.
- § 60.6 Review of plans.
- § 60.7 Notification and Record Keeping.
- § 60.8 Performance Tests.
- § 60.9 Availability of information.
- § 60.10 State Authority.
- § 60.11 Compliance with Standards and Maintenance Requirements.
- § 60.12 Circumvention.
- § 60.13 Monitoring Requirements.
- § 60.14 Modification.
- § 60.15 Reconstruction.
- § 60.16 Priority List.
- § 60.17 Incorporations by Reference.
- § 60.18 General Control Device Requirements.
- § 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

SECTION IV. APPENDIX G

NSPS SUBPART KKKK, REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Applicability

§ 60.4305 Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part.

§ 60.4310 What types of operations are exempt from these standards of performance?

(a) Not applicable (NA)

(b) NA

(c) NA

(d) NA

Emission Limits

§ 60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NO_x) and sulfur dioxide (SO₂).

§ 60.4320 What emission limits must I meet for nitrogen oxides (NO_x)?

(a) You must meet the emission limits for NO_x specified in Table 1 to this subpart.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_x.

§ 60.4325 What emission limits must I meet for NO_x if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

§ 60.4330 What emission limits must I meet for sulfur dioxide (SO₂)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1) or (a)(2) of this section.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output, or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

(b) NA.

General Compliance Requirements

§ 60.4333 What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(b) NA.

Monitoring

§ 60.4335 How do I demonstrate compliance for NO_x if I use water or steam injection?

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NSPS SUBPART KKKK, REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES

(a) If you are using water or steam injection to control NO_x emissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_x monitor and a diluent gas (oxygen (O₂) or carbon dioxide (CO₂)) monitor, to determine the hourly NO_x emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu).

(2) NA.

(3) NA.

(4) NA.

§ 60.4340 How do I demonstrate continuous compliance for NO_x if I do not use water or steam injection?

(a) NA.

(b) NA.

§ 60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NO_x CEMS is chosen:

(a) Each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_x diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NO_x monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_x emission rate for the hour.

(c) Each fuel flow meter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flow meters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

§ 60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂ (or the hourly average CO₂ concentration is less than 1.0 percent CO₂), a diluent cap value of 19.0 percent O₂ or 1.0 percent CO₂ (as applicable) may be used in the emission calculations.

(c) Correction of measured NO_x concentrations to 15 percent O₂ is not allowed.

(d) If you have installed and certified a NO_x diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

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NSPS SUBPART KKKK, REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES

- (e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.
- (f) Calculate the hourly average NO_x emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

$$E = \frac{(\text{NO}_x)_h * (\text{HI})_h}{P} \quad (\text{Eq. 1})$$

Where:

E = hourly NO_x emission rate, in lb/MWh,

(NO_x)_h = hourly NO_x emission rate, in lb/MMBtu,

(HI)_h = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flow meter(s), e.g., calculated using Equation D-15a in appendix D to part 75 of this chapter, and

P = gross energy output of the combustion turbine in MW.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).

(h) NA.

§ 60.4355 How do I establish and document a proper parameter monitoring plan?

(a) NA.

(b) NA.

§ 60.4360 How do I determine the total sulfur content of the turbine's combustion fuel? NA.

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

§ 60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

§ 60.4370 How often must I determine the sulfur content of the fuel?

The frequency of determining the sulfur content of the fuel must be as follows:

(a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) *Gaseous fuel.* If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) *Custom schedules.* Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the

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characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:

(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.

(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12-month intervals. If any of the samples taken at 12-month intervals has a total sulfur content greater than half but less than the applicable limit, follow the procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.

(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:

(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(B) of this section.

(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(C) of this section.

(C) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.

(iv) If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(i) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(1)(ii) or (iii) of this section shall be followed.

(2) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.

(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.

(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

Reporting

§ 60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

§ 60.4380 How are excess emissions and monitor downtime defined for NO_x?

For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

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(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NO_x control will also be considered an excess emission.

(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

(b) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:

(1) An excess emissions is any unit operating period in which the 4-hour rolling average NO_x emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4- hour rolling average NO_x emission rate" is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(c) NA.

§ 60.4385 How are excess emissions and monitoring downtime defined for SO₂?

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel obtained using daily sampling, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

§ 60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine? NA.

§ 60.4395 When must I submit my reports?

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Performance Tests

§ 60.4400 How do I conduct the initial and subsequent performance tests, regarding NO_x?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) For each test run:

(ii) Measure the NO_x and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flow meter (or flow meters), and measure the

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electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NO_x emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NO_x emission rate in lb/MWh.

(2) Sampling traverse points for NO_x and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

(i) You may perform a stratification test for NO_x and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_x concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5 ppm or ±0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_x concentration during the stratification test; or

(B) For turbines with a NO_x standard greater than 15 ppm @ 15% O₂, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_x concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3 ppm or ±0.3 percent CO₂ (or O₂) from the mean for all traverse points.

(C) NA.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) NA.

(3) If water or steam injection is used to control NO_x with no additional post-combustion NO_x control and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NO_x emissions limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_x emission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.

§ 60.4405 How do I perform the initial performance test if I have chosen to install a NO_x-diluent CEMS?

If you elect to install and certify a NO_x-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

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(c) Use the test data both to demonstrate compliance with the applicable NO_x emission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NO_x emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

§ 60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters? NA.

§ 60.4415 How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO₂ performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17).

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) NA.

(3) NA.

(b) [Reserved]

Definitions

§ 60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

Combustion turbine model means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Diffusion flame stationary combustion turbine means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.

Excess emissions means a specified averaging period over which either (1) the NO_x emissions are higher than the applicable emission limit in §60.4320; (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.4330; or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value

SECTION IV. APPENDIX G

NSPS SUBPART KKKK, REQUIREMENTS FOR STATIONARY COMBUSTION TURBINES

between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

Unit operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Unit operating hour means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

Table 1 to Subpart KKKK of Part 60-Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NOx emission standard
New turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	25 ppm at 15 percent O ₂ or 150 mg/J of useful output (1.2 lb/MWh)



RECEIVED

NOV 26 2008

BUREAU OF AIR REGULATION

November 25, 2008

Ms. Trina Vielhauer, Bureau Chief
Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

Via FedEx
Airbill No. 7971 3878 4456

Re: Tampa Electric Company
Air Construction Permit Issuance
Proof of Publication of the Intent to Issue
DEP File No. 0570039-040-AC

Dear Trina:

Pursuant to Rule 62-110.106(5), F.A.C., enclosed is the proof of publication of the Notice of Intent to Issue the Tampa Electric Company Big Bend Station Air Construction Permit concerning Big Bend Station Two Simple Cycle Combustion Turbines - Generator Peaker Project. This notice was published in the legal section of the Tampa Tribune on November 21, 2008.

Thank you for your attention to this matter. If you have any concerns or questions feel free to contact me or Thuy Nguyen at (813) 228-4654.

Sincerely,

[Handwritten signature]

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

EHSvfkATN108

Enclosure

c/enc: Ms. Mara G. Nasca - FDEP, SW District
Mr. Bruce Mitchell - FDEP, Tallahassee
Ms. Diana Lee - EPCHC

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

(813) 228-4111

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air
Regulation
Project No. 0570039-040-AC
Tampa Electric Company - Big Bend Station
Hillsborough County, Florida

Applicant: The applicant for this project is the Tampa Electric Company. The applicant's authorized representative and mailing address is: Mr. Paul L. Carpinone, Director, Environmental Health and Safety, Tampa Electric Company, Post Office 111, Tampa, Florida 33601-0111.

Facility Location: Tampa Electric Company operates an existing electric utility, the Big Bend Station (Big Bend), located at 13031 Wyandotte Road in Apollo Beach, Hillsborough County, Florida.

Project: The proposed project is to construct two simple cycle combustion turbines (SCCT), with one common electrical generator, and one emergency reciprocating internal combustion engine (RICE) generator set at the existing Big Bend facility. SCCT 4A and SCCT 4B will be coupled to one common generator having a nominal gross generation capacity of 62 megawatts (MW). For each SCCT, the applicant proposes to fire pipeline-quality natural gas (NG) and ultra low sulfur diesel fuel (ULSD) while operating in the simple cycle mode. The NG shall contain no more than 2.0 grains of sulfur per 100 standard cubic feet and the ULSD shall contain no more than 0.0015 percent sulfur content, by weight. The hours of operation are limited to 3,500 per SCCT per year while firing NG and 500 per SCCT per year while firing ULSD (any hour used to fire ULSD fuel will decrease an hour that could have been used to fire natural gas). Excluding emergency conditions, the RICE-generator set will only be operated for approximately 2 hours per week (100 hr/yr) each for routine testing and maintenance purposes and will fire only ULSD.

The project is not subject to the rules for the Prevention of Significant Deterioration (PSD) at Rule 62-212.400, Florida Administrative Code (F.A.C.), because there will not be significant net emissions increases of any criteria pollutant. For nitrogen oxides (NOx), creditable emission decreases from the permanent shutdown of the existing combustion turbines Nos. 1, 2 and 3 were used to net out of PSD new source review requirements at Rule 62-212.400, F.A.C. Therefore, the project is considered a minor modification to a major facility. An air quality impact analysis was not required.

An oxidation catalyst will be installed on each SCCT to reduce the emissions of carbon monoxide (CO) and volatile organic compounds (VOC). The use of low sulfur fuels, essentially inherently clean fuels, will minimize the emissions of sulfur dioxide (SO2), sulfuric acid mist (SAM), particulate matter (PM) and PM with an aerodynamic diameter equal to or less than 10 microns (PM10). Water injection will be used on each SCCT to minimize the emissions of NOx.

Each SCCT will be subject to the allowable NOx and SO2 emission limitations given in Title 40, Code of Federal Regulations, Part 60 (40 CFR 60), Subpart KKKK - Standards of Performance for Stationary Combustion Turbines that Commence Construction after February 18, 2005; however, for NOx when firing ULSD, the applicant requested a more stringent limit than what is allowed by the subpart.

The RICE-generator set is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart ZZZZ, for Stationary RICE, because the potential emissions of hazardous air pollutants are less than major for the project; however, the RICE-generator set is entitled to the generic emissions unit exemption at Rule 62-210.300(3)(b)1, F.A.C., One or More Emergency Generators Located Within a Single Facility.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site:
www.dep.state.fl.us/air/eproducts/apds/default.asp

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the

The Tampa Tribune

Published Daily

Tampa, Hillsborough County, Florida

State of Florida }
County of Hillsborough } SS.

Before the undersigned authority personally appeared C. Pugh, who on oath says that she is the Advertising Billing Supervisor of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of the

Legal Ads IN THE Tampa Tribune

In the matter of Legal Notices

was published in said newspaper in the issues of

11/21/2008

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, this advertisement for publication in the said newspaper.

Sworn to and subscribed by me, this 21 day of November, A.D. 2008

Personally Known or Produced Identification
Type of Identification Produced _____



Ana Maria Hodel
Commission #DD551367
Expires: MAY 11, 2010
www.AARONNOTARY.com

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S., or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

Livingston, Sylvia

From: Burrows, Byron T. [BTBurrows@tecoenergy.com]
Sent: Wednesday, December 10, 2008 4:37 PM
To: Livingston, Sylvia
Subject: Re: TECO - BIG BEND STATION; 0570039-040-AC

I am able to open docs. Thanks.
From Blackberry
Byron Burrows
Mobile: 813.230.3445

From: Livingston, Sylvia
To: Carpinone, Paul L.; Lukcic, David M.; Burrows, Byron T.; Nguyen, Andrew T.
Cc: tdavis@ectinc.com ; campbell@epchc.org ; Lee@epchc.org ; Zhu@epchc.org ; Gibson, Victoria ; Arif, Syed ; Mitchell, Bruce ; Walker, Elizabeth (AIR)
Sent: Wed Dec 10 16:17:29 2008
Subject: TECO - BIG BEND STATION; 0570039-040-AC

Dear Sir/ Madam:

Attached is the official **Notice of Final Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". **We must receive verification that you are able to access the documents.** Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570039.040.AC.F_pdf.zip

Owner/Company Name: TAMPA ELECTRIC COMPANY
Facility Name: BIG BEND STATION
Project Number: 0570039-040-AC
Permit Status: FINAL
Permit Activity: CONSTRUCTION
Facility County: HILLSBOROUGH
Processor: Bruce Mitchell

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

<<0570039-040-AC_Signatures.pdf>>

Sylvia Livingston
Bureau of Air Regulation

12/10/2008

Livingston, Sylvia

From: Tom Davis [tdavis@ectinc.com]
Sent: Wednesday, December 10, 2008 4:28 PM
To: Livingston, Sylvia
Subject: RE: TECO - BIG BEND STATION; 0570039-040-AC

Sylvia,

I have received and can view the documents provided.

Thanks.

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, December 10, 2008 4:17 PM
To: plcarpinone@tecoenergy.com; dmlukcic@tecoenergy.com; btburrows@tecoenergy.com; atnguyen@tecoenergy.com
Cc: tdavis@ectinc.com; campbell@epchc.org; Lee@epchc.org; Zhu@epchc.org; Gibson, Victoria; Arif, Syed; Mitchell, Bruce; Walker, Elizabeth (AIR)
Subject: TECO - BIG BEND STATION; 0570039-040-AC

Dear Sir/ Madam:

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<<0570039-040-AC_Signatures.pdf>>

Sylvia Livingston

12/10/2008

Livingston, Sylvia

From: Lukcic, David M. [DMLukcic@tecoenergy.com]
To: Livingston, Sylvia
Sent: Wednesday, December 10, 2008 4:19 PM
Subject: Read: TECO - BIG BEND STATION; 0570039-040-AC

Your message

To: DMLukcic@tecoenergy.com
Subject:

was read on 12/10/2008 4:19 PM.

Livingston, Sylvia

From: Nguyen, Andrew T. [atnguyen@tecoenergy.com]
Sent: Wednesday, January 07, 2009 1:45 PM
To: Livingston, Sylvia
Subject: RE: TECO - BIG BEND STATION; 0570039-040-AC

Dear Sylvia,

Thank you for the reminder. This email is to confirm that TECO has received the subject project on December 10, 2008.

Take care,

Andrew (Thuy) Nguyen

Senior Engineer
EHS - Air Programs
Tampa Electric Company
P.O. Box 111
Tampa, FL 33601-0111
Office: 813-228-4654
Fax: 813-228-1308
Cell: 813-309-1341
atnguyen@tecoenergy.com

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Tuesday, January 06, 2009 11:48 AM
To: Nguyen, Andrew T.
Subject: FW: TECO - BIG BEND STATION; 0570039-040-AC

Hi Andrew,

I am going through email responses and noticed that I didn't have one from you or Paul Carpinone. Could you find the original email and send me a confirmation for this one?

Thanks,

Sylvia Livingston

Bureau of Air Regulation

Division of Air Resource Management (DARM)

850/921-9506

sylvia.livingston@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few

minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.

From: Livingston, Sylvia
Sent: Wednesday, December 10, 2008 4:17 PM
To: 'plcarpinone@tecoenergy.com'; 'dmlukcic@tecoenergy.com'; 'btburrows@tecoenergy.com'; 'atnguyen@tecoenergy.com'
Cc: 'tdavis@ectinc.com'; 'campbell@epchc.org'; 'Lee@epchc.org'; 'Zhu@epchc.org'; Gibson, Victoria; Arif, Syed; Mitchell, Bruce; Walker, Elizabeth (AIR)
Subject: TECO - BIG BEND STATION; 0570039-040-AC

Dear Sir/ Madam:

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Owner/Company Name: TAMPA ELECTRIC COMPANY

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Permit Status: FINAL

Permit Activity: CONSTRUCTION

Facility County: HILLSBOROUGH

Processor: Bruce Mitchell

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<<0570039-040-AC_Signatures.pdf>>

Sylvia Livingston

Bureau of Air Regulation

Division of Air Resource Management (DARM)

850/921-9506

sylvia.livingston@dep.state.fl.us