

Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

November 14, 2003

Mr. Timothy Bates  
Director of Energy Supply  
Lakeland Electric  
501 East Lemon Street  
Lakeland, Florida 33801-5079

Re: Title V Air Operation Permit Renewal  
PROPOSED Permit Project No.: 1050004-016-AV  
C. D. McIntosh, Jr. Power Plant

Dear Mr. Bates:

One copy of the "PROPOSED Determination" for the renewal of a Title V Air Operation Permit for the C. D. McIntosh, Jr. Power Plant located at 3030 East Lake Parker Drive, Lakeland, Polk County, is enclosed. This letter is only a courtesy to inform you that the DRAFT Permit has become a PROPOSED Permit.

An electronic version of this determination has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is:

"[http://www.dep.state.fl.us/air/permitting/airpermits/AirSearch\\_ltd.asp](http://www.dep.state.fl.us/air/permitting/airpermits/AirSearch_ltd.asp)"

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED Permit is made by the USEPA within 45 days, the PROPOSED Permit will become a FINAL Permit no later than 55 days after the date on which the PROPOSED Permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED Permit, the FINAL Permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Edward J. Svec, at 850/921-8985.

Sincerely,

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

TV/es

Enclosures

copy furnished to:  
Kennard Kosky, PE, Golder Associates Inc.  
Farzie Sletton, Lakeland Electric  
Gerald Kissel, PE, FDEP SWD  
USEPA, Region 4 (INTERNET E-mail Memorandum)

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## **PROPOSED Determination**

Title V Air Operation Permit Renewal  
PROPOSED Permit Project No.: 1050004-016-AV  
Page 1 of 1

### **I. Public Notice.**

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" to Lakeland Electric for the C. D. McIntosh, Jr. Power Plant located at 3030 East Lake Parker Drive, Lakeland, Polk County was clerked on October 1, 2003. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" was published in The Ledger on October 15, 2003. The DRAFT Permit was available for public inspection at the Southwest District office in Tampa and the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT RENEWAL" was received on October 20, 2003.

### **II. Public Comment(s).**

No comments were received during the 30 (thirty) day public comment period. Since no comments were received, the DRAFT Permit becomes the PROPOSED Permit.

### **III. Conclusion.**

Since there were no comments received during the Public Notice period, no changes were made to the DRAFT Permit and the permitting authority hereby issues the PROPOSED Permit.

## STATEMENT OF BASIS

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant  
Facility ID No.: 1050004  
Polk County

Title V Air Operation Permit Renewal  
PROPOSED Permit Project No.: 1050004-016-AV

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

The subject of this permit is for the renewal of Title V Air Operation Permit.

This facility consists of three fossil fuel fired steam generators, two diesel powered generators, and two gas turbines. Fossil fuel fired steam generators 1 and 2 are fired with No. 6 fuel oil and natural gas, with distillate oil used as an igniter. Fossil fuel fired steam generator 3 is primarily fired with coal, refuse derived fuel and petroleum coke. Gas Turbine Peaking Unit 1 is primarily fired with natural gas, or No. 2 fuel oil with a maximum sulfur content of 0.5 percent by weight. McIntosh Unit 5, a 370 MW combined cycle stationary combustion turbine, is fired with natural gas, or No. 2 or superior grade fuel oil with a maximum sulfur content of 0.05 percent by weight.

McIntosh Unit 1 is a forced draft boiler rated at a nominal load of 90 megawatts. The unit is fired with natural gas at a maximum heat input rate of 985 million Btu per hour (approximately 970 million cubic feet per hour), or No. 6 fuel oil, having a maximum sulfur content of 2.5 percent by weight, at a maximum heat input rate of 950 million Btu per hour (approximately 6,300 gallons per hour). This unit is also permitted to burn "on-specification" used oil generated by the City of Lakeland, at a maximum heat input rate of 950 million Btu per hour. McIntosh Unit 1 began commercial service in February, 1971. CAM does not apply.

Diesel Engine Peaking Units 2 and 3 are diesel fired internal combustion engines, which each drives a generator capable of producing electric power at a maximum rating of 2.5 megawatts. These units are each fired on No. 2 fuel oil, with a maximum sulfur content of 0.5 percent by weight, at a maximum firing rate of 201.6 gallons per hour. This corresponds to a maximum heat input of 28 million Btu per hour. Diesel Engine Peaking Units 2 and 3 began commercial service in 1970. CAM does not apply.

Gas Turbine Peaking Unit 1 consists of a gas turbine, which drives a generator producing electrical power at a nominal nameplate rating of 20 megawatts. The gas turbine is fired with natural gas, or No. 2 fuel oil with a maximum sulfur content of 0.5 percent by weight. The maximum fuel firing rate is 320 million cubic feet per hour of natural gas (approximately 330 million Btu per hour) or 2,310 gallons per hour of No. 2 fuel oil (approximately 320 million Btu per hour). Gas Turbine Peaking Unit 1 began commercial service in 1973. CAM does not apply.

McIntosh Unit 2 is a nominal 114.7 megawatt (electric) fossil fuel fired steam generator. The unit is fired on low sulfur No. 6 or No. 2 fuel oil with a maximum heat input of 1,115 million Btu per hour, or natural gas with a maximum heat input of 1,184.5 million Btu per hour. McIntosh Unit 2 began commercial service in June, 1976. CAM does not apply.

McIntosh Unit 3 is a nominal 364 megawatt (electric) dry bottom wall-fired fossil fuel fired steam generator. The unit is fired on coal, residual oil, natural gas and co-fires refuse derived fuel (RDF) and

petroleum coke. The maximum heat input rate is 3,640 million Btu per hour. Unit 3 is equipped with an electrostatic precipitator (ESP), a flue gas desulfurization system (FGD), and low-NO<sub>x</sub> burners to control emissions. McIntosh Unit 3 began commercial service in September, 1982. CAM does apply.

McIntosh Unit 5 is a Westinghouse 501G combustion turbine operating in combined cycle with a HRSG and 120 MW steam electric turbine. The turbine is fired with natural gas or a maximum 0.05 percent, by weight, sulfur content No. 2 or superior grade of distillate fuel oil. CAM does not apply.

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

Based on the Title V Air Operation Permit Renewal application received April 30, 2003, this facility is a major source of hazardous air pollutants (HAPs).

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant  
**Facility ID No.:** 1050004  
Polk County

## **Title V Air Operation Permit Renewal**

**PROPOSED Permit Project No.:** 1050004-016-AV

Permitting Authority:

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

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

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

Compliance Authority:

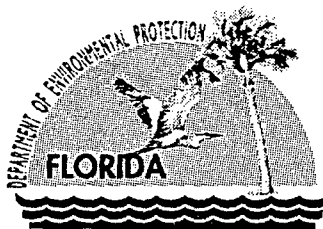
Department of Environmental Protection  
Southwest District Office  
3804 Coconut Palm Drive  
Tampa, Florida 33619-8218  
Telephone: 813/744-6100  
Fax: 813/744-6084

# Title V Air Operation Permit Renewal

PROPOSED Permit No.: 1050004-016-AV

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Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

**Permittee:**  
Lakeland Electric  
501 East Lemon Street  
Lakeland, Florida 33801-5079

**PROPOSED Permit No.:** 1050004-016-AV  
**Facility ID No.:** 1050004  
**SIC No(s):** 49, 4911  
**Project:** Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V Air Operation Permit for the C. D. McIntosh, Jr. Power Plant. This existing facility is located at 3030 East Lake Parker Drive, Lakeland, Polk County; UTM Coordinates: Zone 17, 409.0 km East and 3106.2 km North; Latitude: 28° 04' 50" North and Longitude: 81° 55' 32" West.

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

**Referenced attachments made a part of this permit:**

Appendix U-1, List of Unregulated Emissions Units and/or Activities  
Appendix I-1, List of Insignificant Emissions Units and/or Activities  
APPENDIX TV-4, TITLE V CONDITIONS version dated 02/12/02  
APPENDIX SS-1, STACK SAMPLING FACILITIES version dated 10/07/96  
TABLE 297.310-1, CALIBRATION SCHEDULE version dated 10/07/96  
FIGURE 1 - SUMMARY REPORT-GASEOUS AND OPACITY EXCESS EMISSION AND  
MONITORING SYSTEM PERFORMANCE REPORT version dated 07/96  
Appendix CP-1, Compliance Plan for McIntosh Unit 5  
Alternate Sampling Procedure: ASP Number 97-B-01  
Appendix 40 CFR 60 Subpart A - General Provisions (version dated 07/23/97)  
W501G McIntosh #5, Lakeland FL - Maximum Heat Input as a Function of Compressor Inlet Temperature (1/5/01)  
Appendix CAM

**Effective Date:** January 1, 2004

**Renewal Application Due Date:** July 5, 2008

**Expiration Date:** December 31, 2008

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Michael G. Cooke, Director  
Division of Air Resource  
Management

MGC/sms/es

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**Section I. Facility Information.**

**Subsection A. Facility Description.**

This facility consists of three fossil fuel fired steam generators, two diesel powered generators, and two gas turbines. Fossil fuel fired steam generators 1 and 2 are fired with No. 6 fuel oil and natural gas, with distillate oil used as an igniter. Fossil fuel fired steam generator 3 is primarily fired with coal, refuse derived fuel and petroleum coke. Gas Turbine Peaking Unit 1 is primarily fired with natural gas, or No. 2 fuel oil with a maximum sulfur content of 0.5 percent by weight. McIntosh Unit 5, a 370 MW combined cycle stationary combustion turbine, is fired with natural gas, or No. 2 or superior grade fuel oil with a maximum sulfur content of 0.05 percent by weight.

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

Based on the Title V Air Operation Permit Renewal application received April 30, 2003, this facility is a major source of hazardous air pollutants (HAPs).

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

| <u>E.U. ID No.</u> | <u>Brief Description</u>  |
|--------------------|---|
| -001               | McIntosh Unit 1 - Fossil Fuel Fired Steam Generator                   |
| -002               | Diesel Engine Peaking Unit 2  |
| -003               | Diesel Engine Peaking Unit 3  |
| -004               | Gas Turbine Peaking Unit 1  |
| -005               | McIntosh Unit 2 - Fossil Fuel Fired Steam Generator                   |
| -006               | McIntosh Unit 3 - Fossil Fuel Fired Steam Generator                   |
| -028               | McIntosh Unit 5 - 370 MW Combined Cycle Stationary Combustion Turbine |

**Unregulated Emissions Units and/or Activities**

|      |   |
|------|---|
| -007 | Tanks with greater than 10,000 gallon capacity installed prior to July 23, 1984     |
| -008 | Diesel drive coal tunnel sump engine  |
| -009 | Fire water UPS diesel No. 31  |
| -010 | Fire water UPS diesel No. 32  |
| -011 | CT startup diesel   |
| -012 | General purpose diesel engines  |
| -013 | Emergency generators  |
| -014 | General purpose painting  |
| -015 | Parts Cleaning  |
| -016 | Sand Blasting (Maintenance only)  |
| -017 | Wastewater Treatment Tank   |
| -018 | Three Cooling Towers (Units 2 and 3)  |
| -019 | Northside Waste Water Treatment Facility - Wastewater treatment processes and tanks |
| -020 | Northside Waste Water Treatment Facility - Two emergency diesel generators          |
| -021 | Northside Waste Water Treatment Facility - Chemical and petroleum storage           |
| -022 | Northside Waste Water Treatment Facility - Miscellaneous activities                 |
| -023 | Coal processing and conveying system  |



|      |   |
|------|---|
| -024 | Coal storage system   |
| -025 | Coal transfer and loading system  |
| -026 | Limestone handling and storage system   |
| -027 | Fly ash handling and storage system   |
| -029 | 1.05 million gallon storage tank for McIntosh Unit 5, subject only to the reporting requirements of 40CFR60, Subpart Kb |
| -030 | Mechanical Draft Cooling Tower  |

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

### **Subsection C. Relevant Documents.**

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

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

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

Table 2-1: Summary of Compliance Requirements

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

Appendix H-1, Permit History

Statement of Basis

These documents are on file with the permitting authority:

Initial Title V Air Operation Permit effective January 1, 1999

Title V Air Operation Permit Revision issued March 5, 1999

Title V Air Operation Permit Revision issued November 19, 2000

Title V Air Operation Permit Revision issued October 16, 2001

Title V Air Operation Permit Administrative Correction issued December 18, 2001

Title V Air Operation Permit Revision issued July 7, 2003

Application for a Title V Air Operation Permit Renewal received April 30, 2003

Additional Information Request dated June 11, 2003

Additional Information Response received August 29, 2003

Additional Information Request dated September 5, 2003

Additional Information Response received by e-mail September 26, 2003

Documents on file with USEPA

The Responsible Official has certified that the Risk Management Plan was submitted to the RMP Reporting Center.

## Section II. Facility-wide Conditions.

### The following conditions apply facility-wide:

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.  
{Permitting note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **[Not federally enforceable.]** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.  
[Rule 62-296.320(2), F.A.C.]
3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.  
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]
4. Prevention of Accidental Releases (Section 112(r) of CAA).
  - a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
  - b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
  - c. The owner or operator shall submit the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 9G-21, F.A.C.

Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to:

Department of Community Affairs  
Division of Emergency Management  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100  
Telephone: 850/413-9921; Fax: 850/488-1739

Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

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

Any required reports to be sent to the National Response Center, should be sent to:

National Response Center  
EPA Office of Solid Waste and Emergency Response  
USEPA (5305 W)  
401 M Street, SW  
Washington, D.C. 20460  
Telephone: 1/800/424-8802

Send the required annual registration fee using approved forms made payable to:

Cashier  
Department of Community Affairs  
State Emergency Response Commission  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 9G-21, F.A.C.]

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

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

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

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

7. Compliance Plan. Based on the application, an emissions unit has not completed compliance testing. Appendix CP-1, Compliance Plan, is a part of this permit.

[Rule 62-213.440(2), F.A.C.]

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

The following requirements are "not federally enforceable":

- a. Containers shall be kept closed.

[Rule 62-296.320(1)(a), F.A.C.; Proposed by applicant in the initial Title V permit application received June 14, 1996; Revised by a letter received August 7, 1997]

9. Emissions of Unconfined Particulate Matter. Pursuant to Rules 62-296.320(4)(c)1., 3. & 4., F.A.C., reasonable precautions to prevent emissions of unconfined particulate matter at this facility include the following requirements (see Condition 57. of APPENDIX TV-4, TITLE V CONDITIONS):

- a. maintenance of paved areas;
- b. regular mowing of grass and care of vegetation; and,
- c. limiting access to plant property by unnecessary vehicles.

[Rule 62-296.320(4)(c)2., F.A.C.; Proposed by applicant in the initial Title V permit application received June 14, 1996, as amended in a request received July 8, 1997]

10. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one. [Rule 62-213.440, F.A.C.]

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

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

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

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

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

United States Environmental Protection Agency  
Region 4  
Air, Pesticides & Toxics Management Division  
Air and EPCRA Enforcement Branch  
Air Enforcement Section  
61 Forsyth Street  
Atlanta, Georgia 30303-8960  
Telephone: 404/562-9155; Fax: 404/562-9163

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

[Rule 62-213.420(4), F.A.C.]

### Section III. Emissions Unit(s) and Conditions.

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

##### E.U.

##### ID No.    Brief Description

-001    McIntosh Unit 1 - Fossil Fuel Fired Steam Generator

McIntosh Unit 1 is a forced draft boiler rated at a nominal load of 90 megawatts. The unit is fired with natural gas at a maximum heat input rate of 985 million Btu per hour (approximately 970 million cubic feet per hour), or No. 6 fuel oil, having a maximum sulfur content of 2.5 percent by weight, at a maximum heat input rate of 950 million Btu per hour (approximately 6,300 gallons per hour). This unit is also permitted to burn "on-specification" used oil generated by the City of Lakeland, at a maximum heat input rate of 950 million Btu per hour. McIntosh Unit 1 began commercial service in February, 1971.

{Permitting note(s): The emissions unit is regulated under Acid Rain, Phase II; and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input.}

#### The following specific conditions apply to the emissions unit listed above:

##### Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rate is as follows:

| <u>Unit No.</u> | <u>MMBtu/hr Heat Input</u> | <u>Fuel Type</u> |
|-----------------|----------------------------|------------------|
| 1               | 985                        | Natural Gas      |
|                 | 950                        | No. 6 Fuel Oil   |
|                 | 950                        | Used Oil         |

When a blend of fuel oil, "on-specification" used oil or natural gas is fired, the heat input is prorated based on the percent heat input of each fuel. The Acid Rain CEM will not be a method of compliance for the determination of the heat input rate.

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**A.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition A.23.  
[Rule 62-297.310(2), F.A.C.]

**A.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are natural gas, propane, No. 6 Fuel Oil, On-Specification Used Oil, No. 2 Fuel Oil and combinations of natural gas, propane, No. 6 Fuel Oil, No. 2 Fuel Oil and/or On-Specification Used Oil. On-Specification used oil containing any quantifiable levels of PCBs can only be fired when the emissions unit is at normal operating temperatures.  
[Rule 62-213.410, F.A.C.; and, 40 CFR 271.20(e)(3)]

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

### **Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging times for Specific Conditions A.5.-A.9. are based on the specified averaging time of the applicable test method.}

**A.5. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.  
[Rule 62-296.405(1)(a), F.A.C.]

**A.6. Visible Emissions - Soot Blowing and Load Change.** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.  
[Rule 62-210.700(3), F.A.C.]

**A.7. Particulate Matter.** Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.  
[Rule 62-296.405(1)(b), F.A.C.]

**A.8. Particulate Matter - Soot Blowing and Load Change.** Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.  
[Rule 62-210.700(3), F.A.C.]

**A.9. Sulfur Dioxide.** When burning liquid fuel, sulfur dioxide emissions shall not exceed 2.75 pounds per million Btu heat input, as measured by applicable compliance methods.  
[Rule 62-296.405(1) (c)1.j., F.A.C.]

**A.10. Sulfur Dioxide - Sulfur Content.** The No. 6 fuel oil sulfur content shall not exceed 2.5 percent, by weight. See specific condition **A.21**.  
[Rule 62-296.405(1)(e)3., F.A.C.; and, AO 53-243945]

**A.11. "On-Specification" Used Oil.** Only "on-specification" used oil generated by the City of Lakeland shall be fired in this unit. The quantity fired in this unit shall not exceed 1,000 barrels (42,000 gallons) per calendar year. "On-specification" used oil is defined as used oil that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired.

| <u>CONSTITUENT / PROPERTY</u> * | <u>ALLOWABLE LEVEL</u> |
|---------------------------------|------------------------|
| Arsenic                         | 5 ppm maximum          |
| Cadmium                         | 2 ppm maximum          |
| Chromium                        | 10 ppm maximum         |
| Lead                            | 100 ppm maximum        |
| Total Halogens                  | 1000 ppm maximum       |
| Flash Point                     | 100 °F minimum         |
| PCBs                            | less than 50 ppm       |

\* As determined by ASTM Standard D140-70, or equivalent  
[40 CFR 279.11; and, AO 53-243945]

### Excess Emissions

**A.12.** Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.  
[Rule 62-210.700(1), F.A.C.]

**A.13.** Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.  
[Rule 62-210.700(2), F.A.C.]

**A.14.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.  
[Rule 62-210.700(4), F.A.C.]

### Monitoring of Operations

**A.15. Sulfur Dioxide.** The permittee elected to demonstrate compliance by accepting a liquid fuel sulfur limit that will be verified with a fuel analysis provided by the vendor or the permittee upon each fuel delivery. This protocol is allowed because the emissions unit

does not have an operating flue gas desulfurization device. See specific conditions A.10., A.20. and A.21.

[Rule 62-296.405(1)(f)1.b., F.A.C.]

**A.16. Determination of Process Variables.**

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

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

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

**Test Methods and Procedures**

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

**A.17. Visible emissions.** The test method for visible emissions shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition A.18.

[Rule 62-296.405(1)(e)1., F.A.C.]

**A.18. DEP Method 9.** The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.

2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:

a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.

b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for



the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

**A.19. Particulate Matter.** The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.

[Rules 62-296.405(1)(e)2. and 62-297.401, F.A.C.]

**A.20. Sulfur Dioxide.** The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedances of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards. **The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure authorized by permit, the permittee elected to demonstrate compliance by accepting a liquid fuel sulfur limit that will be verified with a fuel analysis provided by the vendor or the permittee upon each fuel delivery.** See specific conditions A.10. and A.21.

[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.; and, AO 53-243945]

**A.21.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, or both ASTM D4057-88 and ASTM D129-91, or the respective successor ASTM method(s).

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b. and 62-297.440, F.A.C.]

**A.22. Required Number of Test Runs.** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may

accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**A.23. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**A.24. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**A.25. Applicable Test Procedures.**

(a) Required Sampling Time.

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

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

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

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

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

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

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

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

**A.26. Required Stack Sampling Facilities.** When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

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

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

(a) General Compliance Testing.

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

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

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

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

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

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.

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

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

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

**A.28.** By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning:

- a. only gaseous fuel(s); or
  - b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
  - c. only liquid fuel(s) for less than 400 hours per year.
- [Rule 62-297.310(7)(a)4., F.A.C.]

**A.29.** Annual and permit renewal compliance testing for particulate matter emissions is not required for this emissions unit while burning:

- a. only gaseous fuel(s); or
  - b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
  - c. only liquid fuel(s) for less than 400 hours per year.
- [Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

**A.30.** Compliance with the “on-specification” used oil requirements will be determined as follows:

- (a) Analysis of a sample collected from each batch delivered for firing; or,
- (b) The new batch delivery is from a collection site that has an acceptable analysis already on file with the facility and the analytical results are assumed by the facility for the batch.

For quantification purposes, the highest concentration of each constituent as determined by any analysis is assumed to be the concentration of the constituent of the blended used oil. See specific condition **A.11.**

[AO 53-243945]

### **Record keeping and Reporting Requirements**

**A.31.** In the case of excess emissions resulting from malfunctions, each owner or operator 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 or the appropriate Local Program.  
[Rule 62-210.700(6), F.A.C.]

**A.32.** Submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.405(1), F.A.C., for each calendar quarter. The nature and

cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C.]

**A.33. Test Reports.**

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

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

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.

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

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

**A.34.** Records shall be kept of each delivery of “on-specification” used oil with a statement of the origin of the used oil and the quantity delivered/stored for firing. In addition, monthly records shall be kept of the quantity of “on-specification” used oil fired in this unit. The above records shall be maintained in a form suitable for inspection, retained for a minimum of five years, and be made available upon request.

[Rule 62-213.440(1)(b)2.b., F.A.C.; and, AO 53-243945]

**A.35.** The permittee shall include in the “Annual Operating Report for Air Pollutant Emitting Facility” a summary of the “on-specification” used oil analyses for the calendar year and a statement of the total quantity of “on-specification” used oil fired in Unit 1 during the calendar year.

[AO 53-243945]

### Section III. Emissions Unit(s) and Conditions.

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

##### E.U.

| <u>ID No.</u> | <u>Brief Description</u>     |
|---------------|------------------------------|
| -002          | Diesel Engine Peaking Unit 2 |
| -003          | Diesel Engine Peaking Unit 3 |

Diesel Engine Peaking Units 2 and 3 are diesel fired internal combustion engines, which each drives a generator capable of producing electric power at a maximum rating of 2.5 megawatts. These units are each fired on No. 2 fuel oil, with a maximum sulfur content of 0.5 percent by weight, at a maximum firing rate of 201.6 gallons per hour. This corresponds to a maximum heat input of 28 million Btu per hour. Diesel Engine Peaking Units 2 and 3 began commercial service in 1970.

{Permitting note(s): The emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required. Each diesel engine peaking unit has its own stack.}

#### The following specific conditions apply to the emissions units listed above:

##### Essential Potential to Emit (PTE) Parameters

###### B.1. Permitted Capacity.

- a. The maximum heat input rate of each diesel engine peaking unit is 28 million Btu per hour [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]
- b. **Not Federally Enforceable.** The maximum firing rate of each diesel engine peaking unit is 201.6 gallons per hour firing No. 2 fuel oil. [AO 53-244726]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **B.13.** [Rule 62-297.310(2), F.A.C.]

**B.3. Methods of Operation - Fuels.** Only distillate (No. 2) fuel oil shall be fired in the diesel engine peaking units.

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

**B.4. Hours of Operation.** These emissions units may operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, AO 53-244726]

### **Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging time for Specific Condition B.5. is based on the specified averaging time of the applicable test method.}

**B.5. Visible Emissions.** Visible emissions from each diesel engine peaking unit shall not be equal to or greater than 20 percent opacity.

[Rule 62-296.320(4)(b)1., F.A.C.; and, AO 53-244726]

**B.6. Not federally enforceable. Sulfur Dioxide - Sulfur Content.** The sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent, by weight.

[AO 53-244726]

### **Excess Emissions**

**B.7.** Excess emissions from these emissions units resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

**B.8.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

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

### **Monitoring of Operations**

**B.9.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by means of a fuel analysis provided by the vendor or the permittee upon each fuel delivery. See specific condition **B.12.**

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



**B.10. Determination of Process Variables.**

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

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

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

**Test Methods and Procedures**

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

**B.11.** The test method for visible emissions shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.

[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.]

**B.12.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, or both ASTM D4057-88 and ASTM D129-91, or the respective successor ASTM method(s).

[Rules 62-213.440 and 62-297.440, F.A.C.; and, AO 53-244726]

**B.13. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**B.14. Applicable Test Procedures.**

(a) **Required Sampling Time.**

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

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

[Rule 62-297.310(4)(a)2.c., F.A.C.]

**B.15. Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

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

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

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

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

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.

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

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

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

[Rule 62-297.310(7), F.A.C.; SIP approved; and, AO 53-244726]

**B.16.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

### **Recordkeeping and Reporting Requirements**

**B.17. Malfunction Reporting.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

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

**B.18. Test Reports.**

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

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

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

### Section III. Emissions Unit(s) and Conditions.

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

**E.U.**

| <b><u>ID No.</u></b> | <b><u>Brief Description</u></b> |
|----------------------|---------------------------------|
| -004                 | Gas Turbine Peaking Unit 1      |

Gas Turbine Peaking Unit 1 consists of a gas turbine, which drives a generator producing electrical power at a nominal nameplate rating of 20 megawatts. The gas turbine is fired with natural gas, or No. 2 fuel oil with a maximum sulfur content of 0.5 percent by weight. The maximum fuel firing rate is 320 million cubic feet per hour of natural gas (approximately 330 million Btu per hour) or 2,310 gallons per hour of No. 2 fuel oil (approximately 320 million Btu per hour). Gas Turbine Peaking Unit 1 began commercial service in 1973.

{Permitting notes: This emissions unit is regulated under Rule 62-210.300, F.A.C., Permits Required. This unit is not subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines.}

**The following specific conditions apply to the emissions units listed above:**

#### **Essential Potential to Emit (PTE) Parameters**

**C.1. Permitted Capacity.**

a. The maximum heat input rate of the turbine is 330 million Btu per hour (lower heating value) at 30 degrees F while firing natural gas and 320 million Btu per hour (lower heating value) at 30 degrees F while firing No. 2 fuel oil.

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

b. **Not Federally Enforceable.** The maximum firing rate of the turbine is 320 million cubic feet per hour when firing natural gas or 2,310 gallons per hour when firing No. 2 fuel oil.

[AO 53-244727]

**C.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition C.13.

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

**C.3. Methods of Operation - Fuels.** Only natural gas or distillate (No. 2) fuel oil shall be fired in the combustion turbine.

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

**C.4. Hours of Operation.** These emissions unit(s) may operate continuously, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, AO 53-244727]

#### **Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging time for Specific Condition C.5. is based on the specified averaging time of the applicable test method.}

**C.5. Visible Emissions.** Visible emissions from each turbine shall not be equal to or greater than 20 percent opacity.  
[Rule 62-296.320(4)(b)1., F.A.C.; and, AO 53-244727]

**C.6. Not federally enforceable. Sulfur Dioxide - Sulfur Content.** The sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent, by weight.  
[AO 53-244727]

### **Excess Emissions**

**C.7.** Excess emissions from these emissions units resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.  
[Rule 62-210.700(1), F.A.C.]

**C.8.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.  
[Rule 62-210.700(4), F.A.C.]

### **Monitoring of Operations**

**C.9.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by means of a fuel analysis provided by the vendor or the permittee upon each fuel delivery. See specific condition **C.12.**  
[Rule 62-213.440, F.A.C.]

**C.10. Determination of Process Variables.**

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

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

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

**Test Methods and Procedures**

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

**C.11.** The test method for visible emissions shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.  
[Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C.]

**C.12.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, or both ASTM D4057-88 and ASTM D129-91, or the respective successor ASTM method(s).  
[Rules 62-213.440 and 62-297.440, F.A.C.; and, AO 53-244727]

**C.13. Not federally enforceable. Operating Rate During Testing.**

Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report.

[Requested in initial Title V permit application response for additional information dated February 10, 1997]

**C.14. Applicable Test Procedures.**

(a) **Required Sampling Time.**

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

observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

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

[Rule 62-297.310(4)(a)2.c., F.A.C.]

**C.15. Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

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

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

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

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

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

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

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

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

[Rule 62-297.310(7), F.A.C.; SIP approved; and, AO 53-244727]

**C.16. Visible Emissions Testing - Annual.** By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning:

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

[Rules 62-297.310(7)(a)4. & 8., F.A.C.]

### **Recordkeeping and Reporting Requirements**

**C.17. Malfunction Reporting.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

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

**C.18. Test Reports.**

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

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

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



**Section III. Emissions Unit(s) and Conditions.**

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

**E.U.**

**ID No.    Brief Description**

-005        McIntosh Unit 2 - Fossil Fuel Fired Steam Generator

McIntosh Unit 2 is a nominal 114.7 megawatt (electric) fossil fuel fired steam generator. The unit is fired on low sulfur No. 6 or No. 2 fuel oil with a maximum heat input of 1,115 million Btu per hour, or natural gas with a maximum heat input of 1,184.5 million Btu per hour. McIntosh Unit 2 began commercial service in June, 1976.

{Permitting note(s): The emissions unit is regulated under Acid Rain, Phase II; and NSPS - 40 CFR 60, Subpart D, Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.}

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

**Essential Potential to Emit (PTE) Parameters**

**D.1. Permitted Capacity.** The maximum operation heat input rate is as follows:

| <u>Unit No.</u> | <u>MMBtu/hr Heat Input</u> | <u>Fuel Type</u> |
|-----------------|----------------------------|------------------|
| 2               | 1,184.5                    | Natural Gas      |
|                 | 1,115                      | No. 6 Fuel Oil   |
|                 | 1,115                      | No. 2 Fuel Oil   |

When a blend of fuel oil and natural gas is fired, the heat input is prorated based on the percent heat input of each fuel. The Acid Rain CEM will not be a method of compliance for the determination of the heat input rate.

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

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**D.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition D.23.

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

**D.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are natural gas, propane, No. 6 Fuel Oil, No. 2 Fuel Oil and combinations of natural gas, propane, No. 6 Fuel Oil and/or No. 2 Fuel Oil.

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

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

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

### **Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging times for Specific Conditions D.5.-D.6.; and, D.8.- D.9. are based on the specified averaging time of the applicable test method.}

#### **Particulate Matter**

**D.5.** On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue.

(2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

[40 CFR 60.42(a)(1) & (2)]

#### **Sulfur Dioxide**

**D.6.** On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel.

[40 CFR 60.43(a)(1)]

**D.7.** Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

[40 CFR 60.43(c)]

#### **Nitrogen Oxides**

**D.8.** On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall

cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO<sub>2</sub> in excess of:

(1) 86 nanograms per joule heat input (0.20 lb per million Btu) derived from gaseous fossil fuel.

(2) 129 nanograms per joule heat input (0.30 lb per million Btu) derived from liquid fossil fuel.

[40 CFR 60.44(a)(1) & (2)]

**D.9.** When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PSNO_x = \frac{w(260)+x(86)+y(130)+z(300)}{w+x+y+z}$$

where:

PSNO<sub>x</sub> = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = is the percentage of total heat input derived from lignite;

x = is the percentage of total heat input derived from gaseous fossil fuel;

y = is the percentage of total heat input derived from liquid fossil fuel; and,

z = is the percentage of total heat input derived from solid fossil fuel (except lignite).

[40 CFR 60.44(b)]

### **Excess Emissions**

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

**D.10.** Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

[40 CFR 60.45(b)(2) and 60.45(g)(1)]

**D.11.** Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

**D.12.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

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

### Monitoring of Operations

#### **D.13. Determination of Process Variables.**

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

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

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

### Test Methods and Procedures

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

**D.14.** In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).

[40 CFR 60.46(a)]

**D.15.** The owner or operator shall determine compliance with the particulate matter and NO<sub>X</sub> standards in 40 CFR 60.42, 60.43, and 60.44 as follows:

(1) The emission rate (E) of particulate matter or NO<sub>X</sub> shall be computed for each run using the following equation:

$$E = C F_d (20.9)/(20.9 - \% O_2)$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

% O<sub>2</sub> = oxygen concentration, percent dry basis.

F<sub>d</sub> = factor as determined from Method 19.

(2) Method 5 shall be used to determine the particulate matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train may be set to provide a gas temperature no greater than 160 ± 14 °C (320 ± 25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The O<sub>2</sub> sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If

the grab sampling procedure is used, the O<sub>2</sub> concentration for the run shall be the arithmetic mean of all the individual O<sub>2</sub> sample concentrations at each traverse point.

(iii) If the particulate run has more than 12 traverse points, the O<sub>2</sub> traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O<sub>2</sub> traverse points.

(3) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

(5) Method 7 shall be used to determine the NO<sub>X</sub> concentration.

(i) The sampling site and location shall be the same as for the SO<sub>2</sub> sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each NO<sub>X</sub> sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The sample shall be taken simultaneously with, and at the same point as, the NO<sub>X</sub> sample.

(iii) The NO<sub>X</sub> emission rate shall be computed for each pair of NO<sub>X</sub> and O<sub>2</sub> samples. The NO<sub>X</sub> emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

[40 CFR 60.46(b)(1), (2), (3), & (5)]

**D.16.** Compliance with the sulfur dioxide emission standard of specific condition **D.7.** shall be demonstrated using the fuel sampling and analysis procedures of specific condition **D.17.**

[Rule 62-213.440, F.A.C. and Applicant Request dated June 14, 1996]

**D.17.** The following fuel sampling and analysis program shall be used to demonstrate compliance with the sulfur dioxide standard and as the substitute for the sulfur dioxide continuous monitoring system:

a. Determine and record the as-fired fuel sulfur content, percent by weight, (1) for liquid fuels using either ASTM D2622-92, ASTM D4294-90, or both ASTM D4057-88 and ASTM D129-91, or the respective successor ASTM method(s), to analyze a representative sample of the blended fuel following each fuel delivery, (2) for gaseous fuels using ASTM D1072-90, or the respective successor ASTM method.

b. Record daily the amount of each fuel fired, the density of each fuel, and the percent sulfur content by weight of each fuel.

c. Utilize the information in a. and b., above, to calculate the SO<sub>2</sub> emission rate to ensure compliance at all times.

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

**D.18.** When combinations of fossil fuels are fired, the owner or operator (in order to compute the prorated standard as shown in 40 CFR 60.44(b)) shall determine the percentage (w, x, y, or z) of the total heat input derived from each type of fuel as follows:

(1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.

(2) ASTM Methods D 240-76 (liquid fuels), or D 1826-77 (gaseous fuels) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the gross calorific values of the fuels.

(3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

[40 CFR 60.46(c)(1), (2), & (3)]

**D.19.** The owner or operator may use the following as alternatives to the reference methods and procedures in 40 CFR 60.46 or in other sections as specified:

(1) The emission rate (E) of particulate matter, SO<sub>2</sub> and NO<sub>X</sub> may be determined by using the F<sub>c</sub> factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E = C F_C (100 / \% \text{ CO}_2)$$

where:

E = emission rate of pollutant, ng/J (lb/million Btu).

C = concentration of pollutant, ng/dscm (lb/dscf).

% CO<sub>2</sub> = carbon dioxide concentration, percent dry basis.

F<sub>c</sub> = factor as determined in appropriate sections of Method 19.

(ii) If and only if the average F<sub>c</sub> factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O<sub>2</sub> and CO<sub>2</sub> concentration according to the procedures in 40 CFR 60.46(b)(2)(ii), (4)(ii), or (5)(ii). Then if F<sub>O</sub> (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F<sub>O</sub> value, as determined from the average values of F<sub>d</sub> and F<sub>c</sub> in Method 19, i.e., F<sub>Oa</sub> = 0.209 (F<sub>da</sub> / F<sub>ca</sub>); then the following procedure shall be followed:

(A) When F<sub>O</sub> is less than 0.97 F<sub>Oa</sub>, then E shall be increased by that proportion under 0.97 F<sub>Oa</sub>, e.g., if F<sub>O</sub> is 0.95 F<sub>Oa</sub>, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When F<sub>O</sub> is less than 0.97 F<sub>Oa</sub> and when the average difference ( $\bar{d}$ ) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 F<sub>Oa</sub>, e.g., if F<sub>O</sub> is 0.95 F<sub>Oa</sub>, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When F<sub>O</sub> is greater than 1.03 F<sub>Oa</sub> and when  $\bar{d}$  is positive, then E shall be decreased by that proportion over 1.03 F<sub>Oa</sub>, e.g., if F<sub>O</sub> is 1.05 F<sub>Oa</sub>, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of 160 °C (320 °F). Method 17 shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and SO<sub>2</sub> may be determined simultaneously with the Method 5 train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 is used in place of the condenser (section 2.1.7) of Method 5.

(ii) All applicable procedures in Method 8 for the determination of SO<sub>2</sub> (including moisture) are used.

(5) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>) for the emission rate correction factor.

(6) For Method 3, Method 3A or 3B may be used.

(7) For Method 3B, Method 3A may be used.

[40 CFR 60.46(d)(1), (2), (3), (5), (6), & (7)]

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

[Rule 62-297.310(1), F.A.C.]

**D.21. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**D.22. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**D.23. 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, the minimum sample volume per run shall be 25 dry standard cubic feet.
- (c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- (d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached as part of this permit.
- (e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

**D.24. Required Stack Sampling Facilities**. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.  
[Rule 62-297.310(6), F.A.C.]

**D.25. Frequency of Compliance Tests**. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

- (a) General Compliance Testing.
3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
- a. Did not operate; or
  - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
- a. Visible emissions, if there is an applicable standard;
  - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
  - c. Each NESHAP pollutant, if there is an applicable emission standard.



5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

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

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

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

**D.26.** By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning:

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

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

**D.27.** Annual and permit renewal compliance testing for particulate matter emissions is not required for this emissions unit while burning:

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

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

### **Continuous Monitoring Requirements**

**D.28.** The owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions.

[40 CFR 60.45(a)]

**D.29. Sulfur Dioxide.** For a fossil fuel fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis under 40 CFR 60.45(d). **The applicant has elected to utilize fuel sampling and analysis in lieu of a continuous monitoring system for sulfur dioxide.** See specific condition **D.17.**

[40 CFR 60.45(b)(2)]

**D.30.** For performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d), the following procedures shall be used:

(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent.

[40 CFR 60.45(c)(3)]

### **Recordkeeping and Reporting Requirements**

**D.31.** Excess emission and monitoring system performance reports shall be submitted to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c).

[40 CFR 60.45(g)]

**D.32.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

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

**D.33.** Submit to the Department a written report of emissions in excess of emission limiting standards for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

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

#### **D.34. Test Reports.**

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

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

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

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

5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
  7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  8. The date, starting time and duration of each sampling run.
  9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
  10. The number of points sampled and configuration and location of the sampling plane.
  11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
  12. The type, manufacturer and configuration of the sampling equipment used.
  13. Data related to the required calibration of the test equipment.
  14. Data on the identification, processing and weights of all filters used.
  15. Data on the types and amounts of any chemical solutions used.
  16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
  17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
  18. All measured and calculated data required to be determined by each applicable test procedure for each run.
  19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
  20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
  21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
- [Rule 62-297.310(8), F.A.C.]

### **Miscellaneous Requirements.**

- D.35.** The permittee shall comply with the requirements contained in Appendix 40 CFR 60, Subpart A, attached to this permit.
- [Rule 62-204.800(7)(d), F.A.C.]

### Section III. Emissions Unit(s) and Conditions.

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

##### E.U.

##### ID No.    Brief Description

-006        McIntosh Unit 3 - Fossil Fuel Fired Steam Generator

McIntosh Unit 3 is a nominal 364 megawatt (electric) dry bottom wall-fired fossil fuel fired steam generator. The unit is fired on coal, residual oil, natural gas and co-fires refuse derived fuel (RDF) and petroleum coke. The maximum heat input rate is 3,640 million Btu per hour. Unit 3 is equipped with an electrostatic precipitator (ESP), a flue gas desulfurization system (FGD), and low-NO<sub>x</sub> burners to control emissions. McIntosh Unit 3 began commercial service in September, 1982. Compliance Assurance Monitoring (CAM) requirements for the ESP are included in APPAEDIX CAM. The FDG is exempted from CAM because the Acid Rain SO<sub>2</sub> continuous emissions monitor will be used to demonstrate continuous compliance.

{Permitting note(s): The emissions unit is regulated under Acid Rain, Phase II; and NSPS - 40 CFR 60, Subpart D, Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 212.400(6), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination; and, Compliance Assurance Monitoring (CAM), adopted and incorporated by reference in Rule 62-204.800, F.A.C.}

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

{Permitting note: In addition to the requirements listed below, these emissions units are also subject to the standards and requirements contained in the Acid Rain Part of this permit (see Section IV).}

#### **Essential Potential to Emit (PTE) Parameters**

**E.1. Capacity.** The maximum heat input rate is 3,640 MMBtu per hour. The Acid Rain CEM will not be a method of compliance for the determination of the heat input rate.  
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel

determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**E.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **E.25.**  
[Rule 62-297.310(2), F.A.C.]

**E.3. Methods of Operation - Fuels.** The only fuels allowed to be burned are:

Coal only

Low sulfur fuel oil only ( $\leq 0.5$  percent sulfur by weight)

Coal and up to 10 percent refuse (based on heat input)

Low sulfur fuel oil and up to 10 percent refuse (based on heat input)

Coal and up to 20 percent petroleum coke (based on weight)

Coal and up to 20 percent petroleum coke (based on weight) and 10 percent refuse (based on heat input)

High sulfur fuel oil ( $> 0.5$  percent sulfur by weight)

Natural gas or propane only, or in combination with any of the other fuels or fuel combinations listed above

[Rules 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-008(B)]

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

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

### **Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging times for Specific Conditions E.5.-E.7.; E.9.-E.11.; and, E.13.-E.14. are based on the specified averaging time of the applicable test method.}

### **Particulate Matter**

**E.5.** Particulate matter emitted to the atmosphere from the boiler shall not exceed:

| (1) | <u>Mode of Firing</u>      | <u>Pound / MMBtu Heat Input</u> |
|-----|----------------------------|---------------------------------|
|     | Coal                       | 0.044                           |
|     | Coal/Petroleum Coke        | 0.044                           |
|     | Coal/Refuse                | 0.050                           |
|     | Coal/Petroleum Coke/Refuse | 0.050                           |
|     | Oil                        | 0.070                           |
|     | Oil/Refuse                 | 0.075                           |

(2) 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

[40 CFR 60.42(a)(2); and, PSD-FL-008(B)]

## Sulfur Dioxide

**E.6.** On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 nanograms per joule heat input (1.2 lb per million Btu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in 40 CFR 60.43(e).

[40 CFR 60.43(a)(1) and (2)]

**E.7.** When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula:

$$PSSO_2 = [y(340) + z(520)]/(y+z)$$

where:

$PSSO_2$  is the prorated standard for sulfur dioxide when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired,

y is the percentage of total heat input derived from liquid fossil fuel, and

z is the percentage of total heat input derived from solid fossil fuel.

[40 CFR 60.43(b)]

**E.8.** Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

[40 CFR 60.43(c)]

**E.9.** A flue gas desulfurization system will be installed to treat exhaust gases and will operate such that whenever coal or blends of coal and petroleum coke or refuse are burned, sulfur dioxide gases discharged to the atmosphere from the boiler shall not exceed 10 percent of the potential combustion concentration (90 percent reduction), or 35 percent of the potential combustion concentration (65 percent reduction), when emissions are less than 0.75 pound per million Btu heat input. Compliance with the percent reduction requirement shall be determined on a 30-day rolling average. This compliance information shall be retained for a period of five years and made available by the City upon request of the Department. Whenever blends of petroleum coke with other fuels are co-fired, sulfur dioxide emissions shall not exceed 0.718 pound per million Btu heat input based on a 30-day rolling average and shall comply with the reduction requirements given above.

[PSD-FL-008(B); and, Rule 62-213.440, F.A.C.]

**E.10.** The burning of high sulfur oil (greater than 0.5 percent sulfur by weight) or a combination of high sulfur oil and municipal refuse as an emergency fuel without the use of the  $SO_2$  scrubber will be allowed only when the flue gas desulfurization system malfunctions to the extent that the burning of coal would cause emission limitations to be exceeded. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu heat input under this condition.

[PSD-FL-008(B)]

E.11. During malfunctions of equipment which cause an interruption of the coal feed to the boiler, the burning of high sulfur oil (greater than 0.5 percent sulfur by weight) or a combination of high sulfur oil and municipal refuse will be allowed only if all flue gases are fully scrubbed by the SO<sub>2</sub> scrubber. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu heat input under this condition.

[PSD-FL-008(B)]

E.12. Continuous burning of natural gas, low sulfur fuel oil (less than or equal to 0.5 percent sulfur by weight), or combinations of these two fuels with or without the use of the SO<sub>2</sub> scrubber will be allowed.

[PSD-FL-008(B)]

### Nitrogen Oxides

E.13. On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO<sub>2</sub> in excess of:

(1) 86 nanograms per joule heat input (0.20 lb per million Btu) derived from gaseous fossil fuel.

(2) 129 nanograms per joule heat input (0.30 lb per million Btu) derived from liquid fossil fuel, liquid fossil fuel and wood residue, or gaseous fossil fuel and wood residue.

(3) 300 nanograms per joule heat input (0.70 lb per million Btu) derived from solid fossil fuel or solid fossil fuel and wood residue (except lignite or a solid fossil fuel containing 25 percent, by weight, or more of coal refuse).

[40 CFR 60.44(a)(1), (2), & (3)]

E.14. Except as provided under paragraphs 40 CFR 60.44(c) and (d), when different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NO_x} = \frac{w(260)+x(86)+y(130)+z(300)}{w+x+y+z}$$

where:

PS<sub>NO<sub>x</sub></sub> = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired or from all fossil fuels and wood residue fired;

w = is the percentage of total heat input derived from lignite;

x = is the percentage of total heat input derived from gaseous fossil fuel;

y = is the percentage of total heat input derived from liquid fossil fuel; and,

z = is the percentage of total heat input derived from solid fossil fuel (except lignite).

[40 CFR 60.44(b)]

### Excess Emissions

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

**E.15.** Periods of excess emissions and monitoring systems (MS) downtime that shall be reported are defined as follows:

(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(2) Sulfur dioxide. Excess emissions for affected facilities are defined as:

(i) Any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) of sulfur dioxide as measured by a continuous monitoring system exceed the applicable standard under 40 CFR 60.43.

[40 CFR 60.45(g)(1), & (2)]

**E.16.** Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

**E.17.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

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

**E.18.** In addition to the requirements of 40 CFR 60.7, each excess emissions report shall include the periods of oil consumption due to flue gas desulfurization system malfunction.

[PSD-FL-008]

### Monitoring of Operations

**E.19.** Determination of Process Variables.

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

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

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



### Test Methods and Procedures

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

**E.20.** In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).  
[40 CFR 60.46(a)]

**E.21.** The owner or operator shall determine compliance with the particulate matter, SO<sub>2</sub>, and NO<sub>X</sub> standards in 40 CFR 60.42, 60.43, and 60.44 as follows:

(1) The emission rate (E) of particulate matter, SO<sub>2</sub>, or NO<sub>X</sub> shall be computed for each run using the following equation:

$$E = C F_d (20.9)/(20.9 - \% O_2)$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

% O<sub>2</sub> = oxygen concentration, percent dry basis.

F<sub>d</sub> = factor as determined from Method 19.

(2) Method 5 shall be used to determine the particulate matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train may be set to provide a gas temperature no greater than 160 ± 14 °C (320 ± 25 °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The O<sub>2</sub> sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O<sub>2</sub> concentration for the run shall be the arithmetic mean of all the individual O<sub>2</sub> sample concentrations at each traverse point.

(iii) If the particulate run has more than 12 traverse points, the O<sub>2</sub> traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O<sub>2</sub> traverse points.

(3) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

(4) Method 6 shall be used to determine the SO<sub>2</sub> concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The O<sub>2</sub> sample shall be taken simultaneously with, and at the same point as, the SO<sub>2</sub> sample. The SO<sub>2</sub> emission rate shall be computed for each pair of SO<sub>2</sub> and O<sub>2</sub> samples. The SO<sub>2</sub> emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

- (5) Method 7 shall be used to determine the NO<sub>X</sub> concentration.
- (i) The sampling site and location shall be the same as for the SO<sub>2</sub> sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.
  - (ii) For each NO<sub>X</sub> sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The sample shall be taken simultaneously with, and at the same point as, the NO<sub>X</sub> sample.
  - (iii) The NO<sub>X</sub> emission rate shall be computed for each pair of NO<sub>X</sub> and O<sub>2</sub> samples. The NO<sub>X</sub> emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

[40 CFR 60.46(b)(1), (2), (3), (4), & (5)]

**E.22.** When combinations of fossil fuels or fossil fuel and wood residue are fired, the owner or operator (in order to compute the prorated standard as shown in 40 CFR 60.43(b) and 60.44(b)) shall determine the percentage (w, x, y, or z) of the total heat input derived from each type of fuel as follows:

- (1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.
- (2) ASTM Methods D 2015-77 (solid fuels), D 240-76 (liquid fuels), or D 1826-77 (gaseous fuels) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the gross calorific values of the fuels. The method used to determine the calorific value of wood residue must be approved by the Administrator.
- (3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

[40 CFR 60.46(c)(1), (2), & (3)]

**E.23.** The owner or operator may use the following as alternatives to the reference methods and procedures in 40 CFR 60.46 or in other sections as specified:

(1) The emission rate (E) of particulate matter, SO<sub>2</sub> and NO<sub>X</sub> may be determined by using the F<sub>c</sub> factor, provided that the following procedure is used:

- (i) The emission rate (E) shall be computed using the following equation:

$$E = C F_c (100 / \% \text{CO}_2)$$

where:

E = emission rate of pollutant, ng/J (lb/million Btu).

C = concentration of pollutant, ng/dscm (lb/dscf).

% CO<sub>2</sub> = carbon dioxide concentration, percent dry basis.

F<sub>c</sub> = factor as determined in appropriate sections of Method 19.

- (ii) If and only if the average F<sub>c</sub> factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O<sub>2</sub> and CO<sub>2</sub> concentration according to the procedures in 40 CFR 60.46(b)(2)(ii), (4)(ii), or (5)(ii). Then if F<sub>O</sub> (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F<sub>O</sub> value, as determined from the average values of F<sub>d</sub> and F<sub>c</sub> in Method 19, i.e., F<sub>Oa</sub> = 0.209 (F<sub>da</sub> / F<sub>ca</sub>), then the following procedure shall be followed:

(A) When  $F_O$  is less than  $0.97 F_{Oa}$ , then  $E$  shall be increased by that proportion under  $0.97 F_{Oa}$ , e.g., if  $F_O$  is  $0.95 F_{Oa}$ ,  $E$  shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When  $F_O$  is less than  $0.97 F_{Oa}$  and when the average difference ( $\bar{d}$ ) between the continuous monitor minus the reference methods is negative, then  $E$  shall be increased by that proportion under  $0.97 F_{Oa}$ , e.g., if  $F_O$  is  $0.95 F_{Oa}$ ,  $E$  shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When  $F_O$  is greater than  $1.03 F_{Oa}$  and when  $\bar{d}$  is positive, then  $E$  shall be decreased by that proportion over  $1.03 F_{Oa}$ , e.g., if  $F_O$  is  $1.05 F_{Oa}$ ,  $E$  shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of  $160\text{ }^\circ\text{C}$  ( $320\text{ }^\circ\text{F}$ ). The procedures of sections 2.1 and 2.3 of Method 5B may be used with Method 17 only if it is used after wet FGD systems. Method 17 shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and  $\text{SO}_2$  may be determined simultaneously with the Method 5 train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 is used in place of the condenser (section 2.1.7) of Method 5.

(ii) All applicable procedures in Method 8 for the determination of  $\text{SO}_2$  (including moisture) are used.

(4) For Method 6, Method 6C may be used. Method 6A may also be used whenever Methods 6 and 3B data are specified to determine the  $\text{SO}_2$  emission rate, under the conditions in 40 CFR 60.46(d)(1).

(5) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the  $\text{O}_2$  concentration ( $\%\text{O}_2$ ) for the emission rate correction factor.

(6) For Method 3, Method 3A or 3B may be used.

(7) For Method 3B, Method 3A may be used.

[40 CFR 60.46(d)(1), (2), (3), (4), (5), (6), & (7)]

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

[Rule 62-297.310(1), F.A.C.]

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

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**E.26. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**E.27. Applicable Test Procedures.**

(a) **Required Sampling Time.**

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

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

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, the minimum sample volume per run shall be 25 dry standard cubic feet.

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

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

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

**E.28. Required Stack Sampling Facilities.** When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit. [Rule 62-297.310(6), F.A.C.]

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

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid 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 Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

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

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

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

c. Each NESHAP pollutant, if there is an applicable emission standard.

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

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

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

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

**E.30.** By this permit, annual emissions compliance testing for visible emissions is not required for this emissions unit while burning:

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

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

**E.31.** Annual and permit renewal compliance testing for particulate matter emissions is not required for this emissions unit while burning:

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

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

### **Continuous Monitoring Requirements**

**E.32.** Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, and either oxygen or carbon dioxide except as provided in 40 CFR 60.45(b).

[40 CFR 60.45(a)]

**E.33.** Certain of the continuous monitoring system requirements under 40 CFR 60.45(a) do not apply to owners or operators under the following conditions:

- (1) For a fossil fuel-fired steam generator that burns only gaseous fossil fuel, continuous monitoring systems for measuring the opacity of emissions and sulfur dioxide emissions are not required.
- (2) For a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the

owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis under 40 CFR 60.45(d).

(3) Notwithstanding 40 CFR 60.13(b), installation of a continuous monitoring system for nitrogen oxides may be delayed until after the initial performance tests under 40 CFR 60.8 have been conducted. If the owner or operator demonstrates during the performance test that emissions of nitrogen oxides are less than 70 percent of the applicable standards in 40 CFR 60.44, a continuous monitoring system for measuring nitrogen oxides emissions is not required. If the initial performance test results show that nitrogen oxide emissions are greater than 70 percent of the applicable standard, the owner or operator shall install a continuous monitoring system for nitrogen oxides within one year after the date of the initial performance tests under 40 CFR 60.8 and comply with all other applicable monitoring requirements under 40 CFR 60.

(4) If an owner or operator does not install any continuous monitoring systems for sulfur oxides and nitrogen oxides, as provided under 40 CFR 60.45(b)(1) and (b)(3) or (b)(2) and (b)(3), a continuous monitoring system for measuring either oxygen or carbon dioxide is not required.

[40 CFR 60.45(b)(1), (2), (3), & (4)]

E.34. For performance evaluations under 40 CFR 60.13(c) and calibration checks under 40 CFR 60.13(d), the following procedures shall be used:

(1) Methods 6, 7, and 3B, as applicable, shall be used for the performance evaluations of sulfur dioxide and nitrogen oxides continuous monitoring systems. Acceptable alternative methods for Methods 6, 7, and 3B are given in 40 CFR 60.46(d).

(2) Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of Appendix B to 40 CFR 60.

(3) For affected facilities burning fossil fuel(s), the span value for a continuous monitoring system measuring the opacity of emissions shall be 80, 90, or 100 percent and for a continuous monitoring system measuring sulfur oxides or nitrogen oxides the span value shall be determined as follows:

[In parts per million]

| Fossil fuel       | Span value for sulfur dioxide |
|-------------------|-------------------------------|
| Gas.....          | {1}                           |
| Liquid.....       | 1,000                         |
| Solid.....        | 1,500                         |
| Combinations..... | 1,000y+1,500z                 |

{1}Not applicable.

where:

x = the fraction of total heat input derived from gaseous fossil fuel, and

y = the fraction of total heat input derived from liquid fossil fuel, and

z = the fraction of total heat input derived from solid fossil fuel.

(4) All span values computed under 40 CFR 60.45(c)(3) for burning combinations of fossil fuels shall be rounded to the nearest 500 ppm.

(5) For a fossil fuel-fired steam generator that simultaneously burns fossil fuel and nonfossil fuel, the span value of all continuous monitoring systems shall be subject to the Administrator's approval.

[40 CFR 60.45(c)(1), (2), (3), (4), & (5)]

**E.35.** For any continuous monitoring system installed under 40 CFR 60.45(a), the following conversion procedures shall be used to convert the continuous monitoring data into units of the applicable standards (ng/J, lb/million Btu):

(1) When a continuous monitoring system for measuring oxygen is selected, the measurement of the pollutant concentration and oxygen concentration shall each be on a consistent basis (wet or dry). Alternative procedures approved by the Administrator shall be used when measurements are on a wet basis. When measurements are on a dry basis, the following conversion procedure shall be used:

$$E = CF[20.9/(20.9\text{-percent O}_2)]$$

where:

E, C, F, and % O<sub>2</sub> are determined under 40 CFR 60.45(f).

(2) When a continuous monitoring system for measuring carbon dioxide is selected, the measurement of the pollutant concentration and carbon dioxide concentration shall each be on a consistent basis (wet or dry) and the following conversion procedure shall be used:

$$E = CF_c [100/\text{percent CO}_2]$$

where:

E, C, F<sub>c</sub> and % CO<sub>2</sub> are determined under 40 CFR 60.45(f).

[40 CFR 60.45(e)(1) and (2)]

**E.36.** The values used in the equations under 40 CFR 60.45(e)(1) and (2) are derived as follows:

(1) E = pollutant emissions, ng/J (lb/million Btu).

(2) C = pollutant concentration, ng/dscm (lb/dscf), determined by multiplying the average concentration (ppm) for each one-hour period by  $4.15 \times 10^{-4}$  M ng/dscm per ppm ( $2.59 \times 10^{-9}$  M lb/dscf per ppm) where M = pollutant molecular weight, g/g-mole (lb/lb-mole). M = 64.07 for sulfur dioxide and 46.01 for nitrogen oxides.

(3) % O<sub>2</sub>, % CO<sub>2</sub> = oxygen or carbon dioxide volume (expressed as percent), determined with equipment specified under 40 CFR 60.45(a).

(4) F, F<sub>c</sub> = a factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted (F), and a factor representing a ratio of the volume of carbon dioxide generated to the calorific value of the fuel combusted (F<sub>c</sub>), respectively.

Values of F and F<sub>c</sub> are given as follows:

(i) For anthracite coal as classified according to ASTM D388-77 (incorporated by reference-see 40 CFR 60.17),  $F = 2,723 \times 10^{-17}$  dscm/J (10,140 dscf/million Btu and  $F_c = 0.532 \times 10^{-17}$  scm CO<sub>2</sub> /J (1,980 scf CO<sub>2</sub> /million Btu).



- (ii) For sub bituminous and bituminous coal as classified according to ASTM D388-77 (incorporated by reference-see 40 CFR 60.17),  $F = 2.637 \times 10^{-7}$  dscm/J (9,820 dscf/million Btu) and  $F_c = 0.486 \times 10^{-7}$  scm CO<sub>2</sub> /J (1,810 scf CO<sub>2</sub> /million Btu).
- (iii) For liquid fossil fuels including crude, residual, and distillate oils,  $F = 2.476 \times 10^{-7}$  dscm/J (9,220 dscf/million Btu) and  $F_c = 0.384 \times 10^{-7}$  scm CO<sub>2</sub> /J (1,430 scf CO<sub>2</sub> /million Btu).
- (iv) For gaseous fossil fuels,  $F = 2.347 \times 10^{-7}$  dscm/J (8,740 dscf/million Btu). For natural gas, propane, and butane fuels,  $F_c = 0.279 \times 10^{-7}$  scm CO<sub>2</sub> /J (1,040 scf CO<sub>2</sub> /million Btu) for natural gas,  $0.322 \times 10^{-7}$  scm CO<sub>2</sub> /J (1,200 scf CO<sub>2</sub> /million Btu) for propane, and  $0.338 \times 10^{-7}$  scm CO<sub>2</sub> /J (1,260 scf CO<sub>2</sub> /million Btu) for butane.
- (5) The owner or operator may use the following equation to determine an F factor (dscm/J or dscf/million Btu) on a dry basis (if it is desired to calculate F on a wet basis, consult the Administrator) or F<sub>c</sub> factor (scm CO<sub>2</sub> /J, or scf CO<sub>2</sub> /million Btu) on either basis in lieu of the F or F<sub>c</sub> factors specified in 40 CFR 60.45(f)(4):

$$F = 10^6 \frac{[227.2 (\text{pct. H}) + 95.5 (\text{pct. C}) + 35.6 (\text{pct. S}) + 8.7 (\text{pct. N}) - 28.7 (\text{pct. O})]}{\text{GCV}}$$

$$F_c = \frac{2.0 \times 10^{-5} (\text{pct. C})}{\text{GCV}}$$

(SI units)

$$F = 10^6 \frac{3.64(\%H) + 1.53(\%C) + 0.57(\%S) + 0.14(\%N) - 0.46(\%O)}{\text{GCV}}$$

(English units)

$$F_c = \frac{20.0(\%C)}{\text{GCV}}$$

(SI units)

$$F_c = \frac{321 \times 10^3 (\%C)}{\text{GCV}}$$

(English units)

(i) H, C, S, N, and O are content by weight of hydrogen, carbon, sulfur, nitrogen, and oxygen (expressed as percent), respectively, as determined on the same basis as GCV by ultimate analysis of the fuel fired, using ASTM method D3178-74 or D3176 (solid fuels) or computed from results using ASTM method D1137-53(75), D1945-64(76), or D1946-77 (gaseous fuels) as applicable. (These five methods are incorporated by reference-see 40 CFR 60.17.)

(ii) GCV is the gross calorific value (kJ/kg, Btu/lb) of the fuel combusted determined by the ASTM test methods D2015-77 for solid fuels and D1826-77 for gaseous fuels as applicable. (These two methods are incorporated by reference-see 40 CFR 60.17.)

- (iii) For affected facilities which fire both fossil fuels and nonfossil fuels, the F or F<sub>C</sub> value shall be subject to the Administrator's approval.
- (6) For affected facilities firing combinations of fossil fuels or fossil fuels and wood residue, the F or F<sub>C</sub> factors determined by paragraphs 40 CFR 60.45(f)(4) or (f)(5) shall be prorated in accordance with the applicable formula as follows:

$$F = \sum_{i=1}^n X_i F_i \quad \text{or} \quad F_C = \sum_{i=1}^n X_i (F_C)_i$$

where:

X<sub>i</sub> = the fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.)

F<sub>i</sub> or (F<sub>C</sub>)<sub>i</sub> = the applicable F or F<sub>C</sub> factor for each fuel type determined in accordance with paragraphs (f)(4) and (f)(5) of this section.

n = the number of fuels being burned in combination.

[40 CFR 60.45(f)(1), (2), (3), (4), (5), & (6)]

**E.37.** Continuous monitors shall be installed and operated in accordance with 40 CFR 60.45 and 60.13. In addition, an ASTM-certified automatic solid fossil fuel sampler shall be installed which produces a representative daily sample for analysis of sulfur, moisture, heating value and ash. The solid fossil fuel data shall be used in conjunction with emissions factors and the continuous monitoring data to calculate SO<sub>2</sub> reduction.

[PSD-FL-008(B)]

### **Recordkeeping and Reporting Requirements**

**E.38.** Excess emission and monitoring system performance reports shall be submitted to the Administrator for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission and MSP report shall include the information required in 40 CFR 60.7(c). The summary report form shall contain the information and be in the format shown in figure 1 (attached to this permit) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

[40 CFR 60.7(d) & 60.45(g)]

**E.39.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

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

**E.40.** Submit to the Department a written report of emissions in excess of emission limiting for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

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

**E.41. Test Reports.**

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

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

**Miscellaneous Requirements.**

**E.42.** The permittee shall comply with the requirements contained in Appendix 40 CFR 60, Subpart A, attached to this permit.

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

**E.43.** The City shall maintain and submit to the Department on an annual basis for a period of five years from the date that the unit is initially co-fired with petroleum coke, information demonstration in accordance with 40 CFR 52.21(b)(33) and 40 CFR 52.21(b)(21)(v) that the operational changes did not result in emissions increases of carbon monoxide, nitrogen oxides, or sulfuric acid mist.

[PSD-FL-008(B)]

**E.44. Use of SO<sub>2</sub> CEMS For Continuous Compliance.** Pursuant to 40 CFR 64.2(b)(1)(vi), the applicant has elected to use the existing certified Acid Rain SO<sub>2</sub> continuous emissions monitor for continuous compliance in order to be exempted from the Compliance Assurance Monitoring (CAM) requirements contained in 40 CFR 64.

[40 CFR 64.2(b)(vi); and, Applicant Request]

**Compliance Assurance Monitoring (CAM) Requirements**

**E.45.** This emissions unit is subject to the CAM requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation; however, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(7)(b), F.A.C.

[40 CFR 64; and, Rules 62-204.800 and 62-213.440(1)(b)1.a., F.A.C.]

### Section III. Emissions Unit(s) and Conditions.

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

**E.U. ID**

**No.**

**Brief Description**

-028      McIntosh Unit 5 – 370 MW Combined Cycle Stationary Combustion Turbine

McIntosh Unit 5 is a Westinghouse 501G combustion turbine operating in combined cycle with a HRSG and 120 MW steam electric turbine. The turbine is fired with natural gas or a maximum 0.05 percent, by weight, sulfur content No. 2 or superior grade of distillate fuel oil.

{Permitting note(s): The emissions unit is regulated under Acid Rain, Phase II; NSPS - 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted and incorporated by reference in Rule 62-204.800(7), F.A.C.; Rule 62-212.400(5), F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated July 10, 1998. Simple cycle combustion turbine operation began in March, 2000. Combined cycle combustion turbine operation began in January, 2002.}

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

**Essential Potential to Emit (PTE) Parameters**

**F.1. Permitted Capacity.** The maximum heat input rates, based on the lower heating value (LHV) of each fuel to Unit 5 at ambient conditions of 59°F temperature, 60% relative humidity, 100% load, and 14.7 psi pressure shall not exceed 2,407 million Btu per hour when firing natural gas, nor 2,236 million Btu per hour when firing No. 2 or superior grade of distillate fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves approved by the Department, attached in appendix W501G McIntosh #5, Lakeland FL – Maximum Heat Input as a Function of Compressor Inlet Temperature (1/5/01), for the heat input correction to other temperatures may be utilized to establish heat input rates over a range of temperatures for compliance determination. Monitoring required under condition F.17. shall satisfy periodic monitoring requirements for heat input.

[Rules 62-4.160(2), 62-210.200(PTE) and 62-213.440(1)(b)1.b., F.A.C.; and, PSD-FL-245C]

**F.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition F.33.  
[Rule 62-297.310(2), F.A.C.]

**F.3. Methods of Operation. Fuels.** Only pipeline natural gas or a maximum 0.05 percent, by weight, sulfur content No. 2 or superior grade of distillate fuel oil shall be fired in this unit.  
[Rules 62-212.400, 62-212.410, and 62-213.410, F.A.C.; and, PSD-FL-245]

**F.4. Hours of Operation.** This emissions unit may operate continuously, i.e., 8,760 hours/year.  
[Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-245]

**F.5. Fuel Usage as Heat Input.**

(a) Natural Gas. Fuel usage as heat input shall not exceed  $15.639 \times 10^{12}$  Btu (LHV) per year (rolled monthly) until the unit achieves the NO<sub>x</sub> emission limits (other than the initial limits) given in specific condition F.9. Thereafter, only the hourly heat input limits given in specific condition F.1. apply.

(b) Fuel Oil. Fuel usage as heat input shall not exceed  $599 \times 10^9$  Btu (LHV) per year (rolled monthly).

[PSD-FL-245]

**Control Technology**

F.6. The permittee shall install SCR equipment and install an oxidation catalyst. The oxidation catalyst shall be designed for a minimum 90% destruction efficiency at base load.

[PSD Permit Modification dated October 8, 2002]

F.7. A water injection system shall be installed for use when firing No. 2 or superior grade distillate fuel oil for control of NO<sub>x</sub> emissions.

[PSD-FL-245]

**Emission Limitations and Standards**

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

{Permitting Note: Unless otherwise specified, the averaging times for Specific Conditions F.9.-F.13. are based on the specified averaging time of the applicable test method.}

F.8. The following table is a summary of the BACT determination and is followed by the applicable specific conditions F.9. through F.13. Values for NO<sub>x</sub> are corrected to 15% O<sub>2</sub>. Values for CO are corrected to 15% O<sub>2</sub>.

| Operational Mode | NO <sub>x</sub> (ppm)                     | CO (ppm)   | VOC (ppm)          | PM/Visibility (% Opacity) | Technology and Comments   |
|------------------|---|--|--------------------|---------------------------|---|
| Combined Cycle   | 7.5 - NG (3 hr avg)<br>15 - FO (3-hr avg) | Oxidation Catalyst (annual test 2 ppm criteria at full load firing natural gas.) | Oxidation Catalyst | 10                        | Conventional SCR with Oxidation Catalyst. Clean fuels, good combustion. |

[PSD Permit Modification dated October 8, 2002]

**F.9. Nitrogen Oxides.** If conventional SCR is installed in conjunction with the conversion to combined cycle operation, achievable short-term NO<sub>x</sub> concentrations in the exhaust gas shall be demonstrated at base load during the first compliance test following installation not to exceed 7.5 ppmvd at 15% O<sub>2</sub> when firing natural gas. If conventional SCR catalyst is installed, NO<sub>x</sub> emissions shall not exceed 7.5 ppmvd at 15% O<sub>2</sub> when firing natural gas and 15 ppmvd at 15% O<sub>2</sub> when firing fuel oil on the basis of a 3-hour average, as measured by the CEMS. In addition, NO<sub>x</sub> emissions calculated as NO<sub>2</sub> (at ISO conditions) shall not exceed 71.1 pounds per hour (when firing natural gas) and 148 pounds per hour (when firing fuel oil) to be demonstrated by stack tests.

[PSD-FL-245]

**F.10. Carbon Monoxide.** After July 31, 2003, the concentration of CO in the exhaust gas shall be additionally controlled by the use of an oxidation catalyst with a minimum of 90% CO removal efficiency (based upon design at base load). The CO emissions shall be tested annually at full load and shall not exceed 2 ppmvd when firing natural gas as measured by EPA Method 10. The oxidation catalyst shall be maintained according to manufacturers' recommendations, however in the event that CO emissions exceed 2ppmvd (as demonstrated by annual testing above) the permittee shall implement a remedy and re-test within 90 days of operation. Should the re-test result in CO emissions exceeding 2 ppmvd, the remedy shall be to completely replace the oxidation catalyst.

[PSD Permit Modification dated October 8, 2002]

**F.11 Sulfur Dioxide.** SO<sub>2</sub> emissions (at ISO conditions) shall not exceed 8 pounds per hour when firing pipeline natural gas and 127 pounds per hour when firing maximum 0.05 percent, by weight, sulfur content No. 2 or superior grade distillate fuel oil, as measured by applicable compliance methods (see specific condition F.29.). Emissions of SO<sub>2</sub> shall not exceed 38.4 tons per year.

[PSD-FL-245C and Applicant Request to Escape PSD Review]

**F.12. Visible Emissions.** Visible emissions shall not exceed 10 percent opacity.

[PSD-FL-245]

**F.13. Volatile Organic Compounds.** Prior to August 1, 2003, emissions shall be minimized through the use of best operating practices and properly tuned combustors. After July 31, 2003, VOC emissions shall be additionally controlled through the use of an oxidation catalyst. CO emissions shall be employed as a surrogate for VOC emissions and no further annual testing will be required.

[PSD Permit Modification dated October 8, 2002]

### **Excess Emissions**

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

**F.14.** Excess emissions from this emissions unit resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized. Excess

emissions occurrences shall in no case exceed four hours in any 24 hour period for cold startup or two hours in any 24 hour period for other reasons unless specifically authorized by the Department for longer duration. During any calendar day in which a start-up, shutdown, or fuel change occurs, the following alternative NO<sub>x</sub> limit applies:

- a. 100 lbs/hr on the basis of a 24-hour average
- b. 200 lbs/hr on the basis of a 24-hour average if fuel oil is fired during a start-up or shut-down within the 24-hour period

[Rule 62-210.700(1), F.A.C.; and, PSD Permit Modification dated October 8, 2002]

**F.15.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

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

### **Monitoring of Operations**

**F.16.** At all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

**F.17.** The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG and using water injection to control NO<sub>x</sub> emissions shall operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within  $\pm 5.0$  percent and shall be approved by the Administrator.

[40 CFR 60.334(a)]

**F.18.** The owner or operator of any stationary gas turbine subject to the provisions of 40 CFR 60, Subpart GG shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

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

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

**F.19. Fuel Oil Monitoring Schedule.** The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 or superior grade fuel oil received at the C. D. McIntosh, Jr. Power Plant, an analysis which reports the sulfur content and



the nitrogen content of the fuel shall be provided by the vendor. The analysis shall also specify the methods by which the analysis was conducted and shall comply with the requirements of 40 CFR 60.335(d). See specific condition **F.29**.  
[PSD-FL-245]

**F.20. Natural Gas Monitoring Schedule.** The following custom monitoring schedule for natural gas is approved (pending EPA concurrence) in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2):

- Monitoring of natural gas nitrogen content shall not be required.
- Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods in specific condition **F.29**. for the measurement of sulfur in gaseous fuels, or an approved alternate method. Once Unit 5 becomes operational, monitoring of the sulfur content of the natural gas shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then fuel sulfur monitoring shall be conducted once per quarter for six quarters and after that, semiannually.
- Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City shall notify DEP of such excess emissions and the custom fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is reexamined.
- The City shall notify DEP of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than one grain per 100 cubic feet of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.
- Records of sampling analyses and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.
- The City may obtain the sulfur content of the natural gas from the fuel supplier (Florida Gas Transmission or Gulfstream) provided the test methods listed in specific condition **F.29**. are used.

[PSD-FL-245]

**F.21. Determination of Process Variables.**

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

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

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

### Test Methods and Procedures

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

**F.22.** To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Department to determine the nitrogen content of the fuel being fired.  
[40 CFR 60.335(a)]

**F.23.** During performance tests to determine compliance, measured NO<sub>x</sub> emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$\text{NO}_x = [\text{NO}_x \text{ obs}] [(P_{\text{ref}})^{0.5} / P_{\text{obs}}] e^{19} [H_{\text{obs}} - 0.00633] [288^{\circ} \text{K} / T_{\text{amb}}]^{1.53}$$

where:

NO<sub>x</sub> = Emissions of NO<sub>x</sub> at 15 percent oxygen and ISO standard ambient conditions.

NO<sub>x</sub> obs = Measured NO<sub>x</sub> emission at 15 percent oxygen, ppmv.

P<sub>ref</sub> = Reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure.

P<sub>obs</sub> = Measured combustor inlet absolute pressure at test ambient pressure.

e = Transcendental constant ( 2.718 )

H<sub>obs</sub> = Specific humidity of ambient air at test.

T<sub>amb</sub> = Temperature of ambient air at test.

[40 CFR 60.335(c)(1)]

**F.24.** When determining compliance with 40 CFR 60.332, Subpart GG - Standards of Performance for Stationary Gas Turbines, the monitoring device of 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with the permitted NO<sub>x</sub> standard at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

[40 CFR 60.335(c)(2)]

**F.25.** The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 40 CFR 60.332 as follows:

- c. U.S. EPA Method 20 (40 CFR 60, Appendix A) shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NO<sub>x</sub> emissions shall be determined at each of the load conditions specified in 40 CFR 60.335(c)(2).

[40 CFR 60.335(c)(3)]

**F.26.** Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, for each fuel, at which this unit will be operated, but not later than 180 days after initial operation of the unit for that fuel, and annually

thereafter as indicated in this permit, by using the reference methods as described in the latest edition of 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C. [PSD-FL-245]

**F.27. Compliance Testing.** Initial (I) performance tests shall be performed on Unit 5 while firing natural gas as well as while firing fuel oil. Initial tests shall also be conducted after any modifications (and shakedown period not to exceed 100 days after restarting the combustion turbine) of air pollution control equipment, including installation of Ultra Low NO<sub>x</sub> burners, Hot SCR, or conventional SCR. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 – September 30) pursuant to Rule 62-297.310(7), F.A.C., on Unit 5, as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

- EPA Reference Method 9, “Visual Determination of the Opacity of Emissions from Stationary Sources” (I,A).
- EPA Reference Method 10, “Determination of Carbon Monoxide Emissions from Stationary Sources” (I,A).
- EPA Reference Method 20, “Determination of Oxides of Nitrogen, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines.” Initial test only for compliance with 40 CFR 60, Subpart GG and (I,A) short-term NO<sub>x</sub> BACT limits (Method 7E or RATA test data may be used to demonstrate compliance for the annual test requirement).
- EPA Reference Method(s) 18 and/or 25A, “Determination of Volatile Organic Concentrations.” Initial test only.

[PSD-FL-245]

**F.28. Continuous compliance with the NO<sub>x</sub> emission limits:** Continuous compliance with the NO<sub>x</sub> emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 24-hr block average (DLN or ULN technology) or a 3-hr average (if SCR is used). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day (or 3-hr period when applicable) and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day (or 3-hr period when applicable). Valid hourly emission rates shall not include periods of startup (including fuel switching), shutdown, or malfunction as defined in Rule 62-210.200, F.A.C., where emissions exceed the applicable NO<sub>x</sub> standard. These excess emissions periods shall be reported as required in specific condition **F.59**. A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at least 15 minutes apart.

[PSD-FL-245]

**F.29. Compliance with the SO<sub>2</sub> and PM/PM<sub>10</sub> emission limits:** Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas and maximum 0.05 percent sulfur (by weight) No. 2 or superior grade distillate fuel oil, is the method for determining compliance for SO<sub>2</sub> and PM/PM<sub>10</sub>. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO<sub>2</sub> standard and the 0.05% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or latest version) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or latest version) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA-approved custom fuel monitoring schedule. The applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. Analysis may be performed by the owner or operator, a service contractor retained by

the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e).  
[PSD-FL-245]

**F.30. Compliance with CO emission limit:** An initial test for CO shall be conducted concurrently with the initial NO<sub>x</sub> test, as required. The initial NO<sub>x</sub> and CO test results shall be the average of three valid one-hour runs. Annual compliance testing for CO may be conducted concurrent with the annual RATA testing for NO<sub>x</sub> required pursuant to 40 CFR 75 (required for gas only).  
[PSD-FL-245]

**F.31. Compliance with the VOC emission limit:** An initial test is required to demonstrate compliance with the BACT VOC emission limit. Thereafter, the CO emission limit will be employed as a surrogate and no annual testing is required.  
[PSD-FL-245]

**F.32.** To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335(a) and (d) to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency. See specific conditions F.18. through F.20.  
[40 CFR 60.335(e)]

**F.33. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input verses ambient temperature). If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than permitted capacity. In this case, subsequent emissions unit operation is limited by adjusting the entire heat input verses ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent of the value reached during the test until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.  
[Rule 62-297.310(2), F.A.C.; and, PSD-FL-245]

**F.34. Required Number of Test Runs.** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic

mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**F.35. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**F.36. Applicable Test Procedures.**

(a) **Required Sampling Time.**

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

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

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

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

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

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

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

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

**F.37.** The permittee shall comply with the requirements contained in APPENDIX SS-1, Stack Sampling Facilities, attached to this permit.

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

**F.38. Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) **General Compliance Testing.**

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

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

- a. Did not operate; or
  - b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
- a. Visible emissions, if there is an applicable standard;
  - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
  - c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
8. Any combustion turbine that does not operate for more than 400 hours per year shall term of its air operation permit.
9. The owner or operator shall notify the Department's Southwest District office, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

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

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

### **Continuous Monitoring Requirements**

**F.39. Continuous Monitoring System**. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from Unit 5. Periods when NO<sub>x</sub> emissions (ppmvd @ 15% oxygen) are above the BACT standards, listed in specific conditions **F.8.** and **F.9.**, shall be reported to the DEP Southwest District office pursuant to Rule 62-4.160(8), F.A.C. Following the format of 40 CFR

60.7, periods of startup, shutdown, malfunction and fuel switching shall be monitored, recorded and reported as excess emissions when emission levels exceed the BACT standards listed in specific conditions F.8. and F.9.  
[PSD-FL-245 and 40 CFR 60.7]

**F.40. CEMS in lieu of Water to Fuel Ratio.** Subject to EPA approval, the NO<sub>x</sub> CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1) specified in specific condition F.48. Subject to EPA approval, calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) and specified in specific condition F.24. will be replaced by the 40 CFR 75 certification tests of the NO<sub>x</sub> CEMS. Upon request from DEP, the CEMS emissions rates for NO<sub>x</sub> on Unit 5 shall be corrected to ISO conditions to demonstrate compliance with the NO<sub>x</sub> standard established in 40 CFR 60.332.  
[PSD-FL-245]

**F.41.** When NO<sub>x</sub> monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time.  
[PSD-FL-245]

**F.42.** A performance evaluation of the CEMS shall be conducted during any required performance test or within 30 days thereafter in accordance with the applicable performance specifications of 40 CFR 60, Appendix B and at other times as required by the Administrator.  
[40 CFR 60.13(c)]

**F.43.** The zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts shall be checked at least once daily in accordance with a written procedure. The zero and span shall, at a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications of 40 CFR 60, Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified.  
[40 CFR 60.13(d)(1)]

**F.44.** Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d)(1), all continuous monitoring systems shall be in continuous operation and shall meet the minimum frequency of operation as follows:  
(2) All continuous monitoring systems for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.  
[40 CFR 60.13(e)]

**F.45.** All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained.  
[40 CFR 60.13(f)]

**F.46.** For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdown, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or

non-reduced form (e.g. ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit. (e.g. rounded to the nearest 1 percent opacity).

[40 CFR 60.13(h)]

**F.47. Continuous Monitoring System.** The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75.

[PSD-FL-245]

### **Record Keeping and Reporting Requirements**

**F.48.** For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as follows:

- a. Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with the permitted nitrogen oxide standard by the initial performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the initial performance test. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).

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

**F.49.** The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.



(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

Quarterly excess emission reports, in accordance with 40 CFR 60.7(a), shall be submitted to the DEP's Southwest District office.

[40 CFR 60.7(c)(1), (2), (3), & (4); and, PSD-FL-245]

**F.50.** The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

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

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

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

**F.51.** (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

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

the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

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

[40 CFR 60.7(e)(1)]

**F.52. Malfunction Reporting.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department's Southwest District office within one (1) working day of: the nature, extent, and duration of the excess emissions; and, the actions taken to correct the problem. 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.; and, PSD-FL-245]

**F.53.** All recorded data shall be maintained on file by the Source for a period of five years.

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

**F.54. 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's Southwest District office on the results of each such test.

(b) The required test report shall be filed with the Department's Southwest District office 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's Southwest District office to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

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

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

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

### **Miscellaneous Requirements.**

**F.55. Definitions.** For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.

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

**F.56. Circumvention.** No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[40 CFR 60.12]

**F.57. Operating Procedures:** Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.

[PSD-FL-245]

**F.58. Compliance Plan.** Based on the application, initial compliance has been demonstrated for natural gas firing, but not for distillate fuel oil firing. Therefore, Appendix CP-1, Compliance Plan for McIntosh Unit 5, has been established and is a part of this permit.  
[Rule 62-213.440(2), F.A.C.]

**Section IV. This section is the Acid Rain Part.**

**Operated by:** Lakeland Electric  
**ORIS code:** 676

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

The emissions unit(s) listed below are regulated under Acid Rain, Phase II.

**E.U.**

| <b>ID No.</b> | <b>Brief Description</b>  |
|---------------|---|
| -001          | Boiler - McIntosh Unit 1  |
| -005          | Boiler - McIntosh Unit 2  |
| -006          | Boiler - McIntosh Unit 3  |
| -028          | McIntosh Unit 5 – 370 MW Combined Cycle Stationary Combustion Turbine |

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

a. DEP Form No. 62-210.900(1)(a), dated 04/29/2003.  
[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

**A.2.** Sulfur dioxide (SO<sub>2</sub>) allowance allocations for each Acid Rain unit is as follows:

| <b>E.U. ID No.</b> | <b>EPA ID</b> | <b>Year</b>  | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> |
|--------------------|---------------|--|-------------|-------------|-------------|-------------|-------------|
| -001               | No. 01        | SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73 | 907*        | 907*        | 907*        | 907*        | 907*        |
| -005               | No. 02        | SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73 | 1029*       | 1029*       | 1029*       | 1029*       | 1029*       |
| -006               | No. 03        | SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73 | 9928*       | 9928*       | 9928*       | 9928*       | 9928*       |
| -028               |               | SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73 | 0*          | 0*          | 0*          | 0*          | 0*          |

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

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

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.  
[Rules 62-213.440(1)(c)1., 2. & 3., F.A.C.]

**A.4. Fast-Track Revisions of Acid Rain Parts.** Those Acid Rain sources making a change described at Rule 62- 214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, F.A.C.  
[Rules 62-213.413 and 62-214.370(4), F.A.C.]

**A.5.** Comments, notes, and justifications: None.

**Subsection B. This subsection addresses Acid Rain, Phase I.**

{Permitting note: The U.S. EPA issues Acid Rain Phase I permit(s)}

The emissions unit listed below is regulated under Acid Rain Part, Phase I, for Lakeland Electric, C. D. McIntosh, Jr. Power Plant, **Facility ID No.:** 1050004, **ORIS code:** 676

**E.U.**

| <b><u>ID No.</u></b> | <b><u>Brief Description</u></b> |
|----------------------|---------------------------------|
| -006                 | Boiler - McIntosh Unit 3        |

**B.1.** The owners and operators of these Phase I acid rain unit(s) must comply with the standard requirements and special provisions set forth in the permit(s) listed below:

- a. Phase I permit dated 03/27/97.  
 [Chapter 62-213, F.A.C.]

**B.2.** Nitrogen oxide (NO<sub>x</sub>) requirements for the following Acid Rain unit is as follows:

| <b><u>E.U. ID No.</u></b> | <b><u>EPA ID</u></b> | <b><u>NO<sub>x</sub> limit*</u></b>  |
|---------------------------|----------------------|--|
| -006                      | No. 03               | <p>Pursuant to 40 CFR 76.8(d)(2), the Florida Department of Environmental Protection approves a NO<sub>x</sub> early election compliance plan for unit No. 03. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO<sub>x</sub> emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under "40 CFR 76.5(a)(2) of 0.50 lb/MMBtu" for dry bottom wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under "40 CFR 76.7(a)(2) of 0.46 lb/MMBtu" for dry bottom wall-fired boilers until calendar year 2008.</p> <p>In addition to the described NO<sub>x</sub> compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO<sub>x</sub> compliance plan and the requirements covering excess emissions.</p> |

\* Based on the Phase II NO<sub>x</sub> Compliance Plan dated December 4, 1997.

**B.3.** Comments, notes, and justifications: none

## Appendix CP-1, Compliance Plan for McIntosh Unit 5

### Compliance Plan for Firing Distillate Oil Firing

C. D. McIntosh, Jr. Power Plant Unit 5 combustion turbine is equipped with dual fuel combustors for firing natural gas and distillate fuel oil. Initial compliance has been demonstrated for natural gas firing, but not for distillate fuel oil firing. Compliance with the allowable emission limiting standards for oil shall be determined within 720 unit-operating hours on oil, as specified by the USEPA Region 4 letter from R. Douglas Nealy dated February 14, 2001. Compliance with the installation of the oxidation catalyst, as required by Specific Condition III.17. of PSD-FL-245, will be demonstrated by a properly signed and sealed certification. The following Compliance Plan, for initial compliance for distillate fuel oil firing and the installation of the oxidation catalyst, follows the requirements of PSD-FL-245, as modified.

- The Department's Southwest District, Air Section, will be notified of the actual date of the restart of Unit 5 on distillate fuel oil within 15 days of such date.
- Compliance with emission limiting standards for NO<sub>x</sub>, CO, SO<sub>2</sub>, Visible Emissions and VOC, as identified in Specific Conditions III.21. through III.25., shall be demonstrated within 720 unit-operating hours on oil.
- Initial performance tests for NO<sub>x</sub>, CO, VOC and Visible Emissions, shall be conducted using the test methods identified in Specific Condition III.30.
- Compliance with SO<sub>2</sub> emission requirements will be demonstrated through fuel oil analyses (i.e., 0.05% sulfur content, by weight, or less), as identified in Specific Condition III.32.
- In approving the initial performance test extension, the USEPA Region 4 waived the 30-day notification requirement of 40 CFR 60.8. The Department's Southwest District, Air Section, shall be notified in writing at least 15 days prior to the initial performance tests, unless another notification period has been approved in writing by the district office.
- Performance test results shall be submitted to the Department's Southwest District, Air Section, no later than 45 days after the last test run.
- Continuous compliance for NO<sub>x</sub> emissions, when firing distillate fuel oil, shall be demonstrated using continuous emission monitoring systems and based on a 3-hour average, as described in Specific Condition III.31.
- Compliance with the installation of the oxidation catalyst requirements will be demonstrated by submitting a properly signed and sealed certification to the Department's Southwest District, Air Section, no later than 30 days after the completion of installation.



**APPENDIX CAM**

**Compliance Assurance Monitoring Requirements**

**Lakeland McIntosh Electric Generating Station**

**Facility ID No: 1050004**

## **Compliance Assurance Monitoring Requirements**

Pursuant to Rule 62-213.440(1)(b)1.a., F.A.C., the CAM plans that are included in this appendix contain the monitoring requirements necessary to satisfy 40 CFR 64. Conditions 1. – 17. are generic conditions applicable to all emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the attached tables, as submitted by the applicant and approved by the Department.

### **40 CFR 64.6 Approval of Monitoring.**

1. The attached CAM plan(s), as submitted by the applicant, is/are approved for the purposes of satisfying the requirements of 40 CFR 64.3.  
[40 CFR 64.6(a)]
2. The attached CAM plan(s) include the following information:
  - (i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);
  - (ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and
  - (iii) The performance requirements established to satisfy 40 CFR 64.3(b) or (d), as applicable.[40 CFR 64.6(c)(1)]
3. The attached CAM plan(s) describe the means by which the owner or operator will define an exceedance of the permitted limits or an excursion from the stated indicator ranges and averaging periods for purposes of responding to (see **CAM Conditions 5. - 9.**) and reporting exceedances or excursions (see **CAM Conditions 10. – 14.**).  
[40 CFR 64.6(c)(2)]
4. The permittee is required to conduct the monitoring specified in the attached CAM plan(s) and shall fulfill the obligations specified in the conditions below (see **CAM Conditions 5. - 17.**).  
[40 CFR 64.6(c)(3)]

### **40 CFR 64.7 Operation of Approved Monitoring.**

5. Commencement of operation. The owner or operator shall conduct the monitoring required under this appendix upon the effective date of this Title V permit.  
[40 CFR 64.7(a)]
6. Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.  
[40 CFR 64.7(b)]
7. Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the

operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.7(c)]

**8. Response to excursions or exceedances.**

- a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions, if allowed by this permit). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR 64.7(d)(1) & (2)]

**9. Documentation of need for improved monitoring.** If the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.7(e)]

**40 CFR 64.8 Quality Improvement Plan (QIP) Requirements.**

**10.** Based on the results of a determination made under **CAM Condition 8.a.**, above, the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with **CAM Condition 4.**, an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, may require the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.

[40 CFR 64.8(a)]

**11. Elements of a QIP:**

- a. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.
- b. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

- (i) Improved preventive maintenance practices.
- (ii) Process operation changes.
- (iii) Appropriate improvements to control methods.
- (iv) Other steps appropriate to correct control performance.
- (v) More frequent or improved monitoring (only in conjunction with one or more steps under **CAM Condition 11.b(i)** through (iv), above).

[40 CFR 64.8(b)]

12. If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

[40 CFR 64.8(c)]

13. Following implementation of a QIP, upon any subsequent determination pursuant to **CAM Condition 8.b.**, the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

- a. Failed to address the cause of the control device performance problems; or
- b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[40 CFR 64.8(d)]

14. Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

[40 CFR 64.8(e)]

#### **40 CFR 64.9 Reporting And Recordkeeping Requirements.**

##### **15. General reporting requirements.**

- a. On and after the date specified in **CAM Condition 5.** by which the owner or operator must use monitoring that meets the requirements of this appendix, the owner or operator shall submit monitoring reports semi-annually to the permitting authority in accordance with Rule 62-213.440(1)(b)3.a., F.A.C.
- b. A report for monitoring under this part shall include, at a minimum, the information required under Rule 62-213.440(1)(b)3.a., F.A.C., and the following information, as applicable:
  - (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
  - (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
  - (iii) A description of the actions taken to implement a QIP during the reporting period as specified in **CAM Conditions 10.** through **14.** Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR 64.9(a)]

##### **16. General recordkeeping requirements.**

- a. The owner or operator shall comply with the recordkeeping requirements specified in Rule 62-213.440(1)(b)2., F.A.C. The owner or operator shall maintain records of monitoring data,

monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to **CAM Conditions 10. through 14.** and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

- b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

[40 CFR 64.9(b)]

#### **40 CFR 64.10 Savings Provisions.**

17. It should be noted that nothing in this appendix shall:

- a. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this appendix shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under Title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.
- b. Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.
- c. Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

[40 CFR 64.10]

## **Emissions Unit 003**

**3,640 MMBtu/Hr Coal And Petroleum Coke-Fired Boiler  
Particulate Matter Emissions Controlled By an Electrostatic Precipitator**

## Monitoring Approach

|                     |  | <u>Compliance Indicator</u>   |
|---------------------|--|---|
| I.                  | Indicator  | Opacity.  |
|                     | Measurement Approach   | Continuous opacity monitoring system (COMS).  |
| II.                 | Indicator Range  | <p>An excursion is defined as any 1-hour average of opacity greater than 12.0%, excluding periods of start-up, shutdown and malfunction pursuant to Rule 62-210.700, F.A.C.</p> <p>An excursion will trigger an evaluation of operation of the boiler and ESP. Corrective action will be taken as necessary. Any excursion will trigger recordkeeping and reporting requirements.</p> |
| III.                | Performance Criteria   |   |
|                     | A. Data Representativeness   | VE measurements are made in the stack   |
|                     | B. Verification of Operational Status                                      | N/A   |
|                     | C. QA/QC Practices and Criteria  | The COMS is automatically calibrated every 24 hours. Calibration information is recorded through a data acquisition system (DAS). A neutral density filter test is performed quarterly, as well as, preventative maintenance items; replace filters, clean optics, etc., as prescribed by the manufacturer.   |
|                     | D. Monitoring Frequency  | Opacity is monitored continuously.  |
|                     | E. Data Collection Procedures  | Six-minute averages are recorded through the DAS. Daily reports with all six-minute and hourly averages are generated. One-hour averages are determined every six minutes from the average of the previous ten consecutive six-minute averages.   |
| F. Averaging Period | The averaging period for opacity observations is a 6-minute block average. |   |

## Appendix U-1: List of Unregulated Emissions Units and/or Activities.

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

PROPOSED Permit No.: 1050004-016-AV  
Facility ID No.: 1050004

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Unregulated Emissions Units and/or Activities. An emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither ‘regulated emissions units’ nor ‘insignificant emissions units’.

### E.U. ID

| <u>No.</u> | <u>Brief Description of Emissions Units and/or Activity</u>  |
|------------|--|
| -007       | Tanks with greater than 10,000 gallon capacity installed prior to July 23, 1984  |
| -008       | Diesel drive coal tunnel sump engine   |
| -009       | Fire water UPS diesel No. 31   |
| -010       | Fire water UPS diesel No. 32   |
| -011       | CT startup diesel  |
| -012       | General purpose diesel engines   |
| -013       | Emergency generators   |
| -014       | General purpose painting   |
| -015       | Parts Cleaning   |
| -016       | Sand Blasting (Maintenance only)   |
| -017       | Wastewater Treatment Tank  |
| -018       | Three Cooling Towers (Units 2 and 3)   |
| -019       | Northside Waste Water Treatment Facility - Wastewater treatment processes and tanks  |
| -020       | Northside Waste Water Treatment Facility - Two emergency diesel generators   |
| -021       | Northside Waste Water Treatment Facility - Chemical and petroleum storage  |
| -022       | Northside Waste Water Treatment Facility - Miscellaneous activities  |
| -023       | Coal processing and conveying system   |
| -024       | Coal storage system  |
| -025       | Coal transfer and loading system   |
| -026       | Limestone handling and storage system  |
| -027       | Flyash handling and storage system   |
| -029       | 1.05 million gallon fuel storage tank for McIntosh Unit 5, subject only to the reporting requirements of 40 CFR 60, Subpart Kb |
| -030       | Mechanical Draft Cooling Tower   |



## Appendix I-1: List of Insignificant Emissions Units and/or Activities.

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

PROPOSED Permit No.: 1050004-016-AV  
Facility ID No.: 1050004

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The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

### Brief Description of Emissions Units and/or Activities

1. Diesel Storage Tank (T-021)
2. Heavy Oil Tank (T-113)
3. Heavy Oil Tank (T-114)
4. Heavy Oil Tank (T-115)
5. Used Oil Tank (T-116)
6. Comfort Heating <1 MMBtu/hr
7. Non-Industrial Vacuum Cleaning
8. Refrigeration Units
9. Vacuum Pumps for Labs
10. Steam Cleaning Equipment
11. Sanders <5 square feet
12. Space Heating Equipment; non-boilers
13. Bakery Ovens
14. Lab Equipment
15. Brazing, Soldering, or Welding
16. Laundry Dryers
17. Fire and Safety Equipment
18. Surface Coating <5% VOC, by volume

## Appendix H-1: Permit History

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

| E.U. ID No. | Description                    | Permit No.     | Effective Date | Expiration Date | Project Type <sup>1</sup> |
|-------------|--------------------------------|----------------|----------------|-----------------|---------------------------|
| All         | Facility                       | 1050004-003-AV | 01/01/1999     | 12/31/2003      | Initial                   |
| -028        | McIntosh Unit 5                | 1050004-004-AC | 07/10/1998     | 07/10/2003      | Construction (new)        |
| -029        | 1.05 MM gal. Storage Tank      |                |                |                 |                           |
| -006        | McIntosh Unit 3                | 1050004-005-AV | 03/05/1999     | 12/31/2003      | Revision                  |
| -002        | Lime Silo #[x]                 | 1050004-006-AC | 01/29/1999     | 01/29/2004      | Construction (mod.)       |
| -006        | McIntosh Unit 3                | 1050004-007-AC | Withdrawn      |                 | Construction (mod.)       |
| -024        | Boiler #[x]                    | 1050004-008-AC | 12/13/1999     | 12/13/2004      | Construction (mod.)       |
| -028        | McIntosh Unit 5                | 1050004-009-AV | 11/19/2000     | 12/31/2003      | Revision                  |
| -029        | 1.05 MM gal. Storage Tank      |                |                |                 |                           |
| -028        | McIntosh Unit 5                | 1050004-010-AC | 06/26/2001     | 12/31/2003      | Construction (mod.)       |
| -028        | McIntosh Unit 5                | 1050004-011-AV | 10/16/2001     | 12/31/2003      | Revision                  |
| All         | Facility                       | 1050004-012-AV | 12/18/2001     | 12/31/2003      | Admin. Correction         |
| -028        | McIntosh Unit 5                | 1050004-013-AC | 12/28/2001     | 05/01/2002      | Construction (mod.)       |
| -028        | McIntosh Unit 5                | 1050004-014-AC | 10/08/2002     | 10/08/2002      | Construction (mod.)       |
| -028        | McIntosh Unit 5                | 1050004-015-AV | 07/07/2003     | 12/31/2003      | Revision                  |
| -030        | Mechanical Draft Cooling Tower |                |                |                 |                           |
| All         | Facility                       | 1050004-016-AV | 01/01/2004     | 12/31/2008      | Renewal                   |

<sup>1</sup> Project Type (select one): Title V: Initial, Revision, Renewal, or Admin. Correction; Construction (new or mod.); or, Extension (AC only).

<sup>2</sup> Change to an actual date, which is day 55 from the date of posting the PROPOSED Permit for EPA review (see confirmation e-mail from Tallahassee) or the date that EPA confirms resolution of any objections.

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-001]              McIntosh Unit 1 - Fossil Fuel Fired Steam Generator

| Pollutant Name  | Fuel(s)  | Hours/Year | Allowable Emissions       |           |     | Equivalent Emissions* |          | Regulatory Citation(s)   | See permit condition(s) |
|-----------------|----------|------------|---------------------------|-----------|-----|-----------------------|----------|--------------------------|-------------------------|
|                 |          |            | Standard(s)               | lbs./hour | TPY | lbs./hour             | TPY      |                          |                         |
| VE              | All      | 8,760      | 20% w/ 40% for 2 min/hr   |           |     |                       |          | 62-296.405(1)(a),FAC     | III.A.5.                |
| VE              | All      |            | 60% 3 hrs/24 hrs          |           |     |                       |          | 62-210.700(3),FAC        | III.A.6.                |
| PM              | Gas      | 8,760      | 0.1 lb/MMBtu              |           |     | 98.5                  | 431.4    | 62-296.405(1)(b),FAC     | III.A.7.                |
| PM              | Oil      | 8,760      | 0.1 lb/MMBtu              |           |     | 95.0                  | 416.1    | 62-296.405(1)(b),FAC     | III.A.7.                |
| PM              | Gas      | 1,095      | 0.3 lb/MMBtu              |           |     | 295.5                 | 161.8    | 62-210.700(3),FAC        | III.A.8.                |
| PM              | Oil      | 1,095      | 0.3 lb/MMBtu              |           |     | 285.0                 | 156.0    | 62-210.700(3),FAC        | III.A.8.                |
| SO <sub>2</sub> | Oil      | 8,760      | 2.75 lb/MMBtu             |           |     | 2,612.5               | 11,442.8 | 62-296.405(1)(c)1.j.,FAC | III.A.9.                |
| SO <sub>2</sub> | Oil      | 8,760      | 2.5% S by weight          |           |     | 2,612.5               | 11,442.8 | AO 53-243945             | III.A.10.               |
| Arsenic         | Used Oil |            | 5 ppm (42,000 gal/yr)     |           |     |                       | 0.0008   | AO 53-243945             | III.A.11.               |
| Cadmium         | Used Oil |            | 2 ppm (42,000 gal/yr)     |           |     |                       | 0.0003   | AO 53-243945             | III.A.11.               |
| Chromium        | Used Oil |            | 10 ppm (42,000 gal/yr)    |           |     |                       | 0.0017   | AO 53-243945             | III.A.11.               |
| Lead            | Used Oil |            | 100 ppm (42,000 gal/yr)   |           |     |                       | 0.017    | AO 53-243945             | III.A.11.               |
| Total Halogens  | Used Oil |            | 1,000 ppm (42,000 gal/yr) |           |     |                       | 0.17     | AO 53-243945             | III.A.11.               |
| PCBs            | Used Oil |            | <50 ppm (42,000 gal/yr)   |           |     |                       | 0.0084   | AO 53-243945             | III.A.11.               |

Notes:  
\* The "Equivalent Emissions" listed are for informational purposes only.

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

| E.U. ID No. | Brief Description            |
|-------------|------------------------------|
| [-002]      | Diesel Engine Peaking Unit 2 |
| [-003]      | Diesel Engine Peaking Unit 3 |

| Pollutant Name  | Fuel(s) | Hours/Year | Allowable Emissions |           |     | Equivalent Emissions* |      | Regulatory Citation(s)  | See permit condition(s) |
|-----------------|---------|------------|---------------------|-----------|-----|-----------------------|------|-------------------------|-------------------------|
|                 |         |            | Standard(s)         | lbs./hour | TPY | lbs./hour             | TPY  |                         |                         |
| VE              | All     | 8,760      | <20%                |           |     |                       |      | 62-296.320(4)(b)1., FAC | III.B.5.                |
| SO <sub>2</sub> | Oil     | 8,760      | 0.5% S by weight    |           |     | 15.4                  | 67.5 | AO 53-244726            | III.B.6.                |

Notes:  
\* The "Equivalent Emissions" listed are for informational purposes only.

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**    **Brief Description**  
[-004]            Gas Turbine Peaking Unit 1

| Pollutant Name  | Fuel(s) | Hours/Year | Allowable Emissions |           |     | Equivalent Emissions* |       | Regulatory Citation(s)  | See permit condition(s) |
|-----------------|---------|------------|---------------------|-----------|-----|-----------------------|-------|-------------------------|-------------------------|
|                 |         |            | Standard(s)         | lbs./hour | TPY | lbs./hour             | TPY   |                         |                         |
| VE              | All     | 8,760      | <20%                |           |     |                       |       | 62-296.320(4)(b)1., FAC | III.C.5.                |
| SO <sub>2</sub> | Oil     | 8,760      | 0.5% S by weight    |           |     | 176.0                 | 770.9 | AO 53-244727            | III.C.6.                |

Notes:  
\* The "Equivalent Emissions" listed are for informational purposes only.

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**    **Brief Description**  
[-005]            McIntosh Unit 2 - Fossil Fuel Fired Steam Generator

| Pollutant Name  | Fuel(s) | Hours/Year | Allowable Emissions     |           |     | Equivalent Emissions* |         | Regulatory Citation(s) | See permit condition(s) |
|-----------------|---------|------------|-------------------------|-----------|-----|-----------------------|---------|------------------------|-------------------------|
|                 |         |            | Standard(s)             | lbs./hour | TPY | lbs./hour             | TPY     |                        |                         |
| PM              | Gas     | 8,760      | 0.10 lb/MMBtu           |           |     | 118.5                 | 518.8   | 40 CFR 60.42(a)(1)     | III.D.5.                |
| PM              | Oil     | 8,760      | 0.10 lb/MMBtu           |           |     | 111.5                 | 488.4   | 40 CFR 60.42(a)(1)     | III.D.5.                |
| VE              | All     | 8,760      | 20% w/ 27% for 6 min/hr |           |     |                       |         | 40 CFR 60.42(a)(2)     | III.D.5.                |
| SO <sub>2</sub> | Oil     | 8,760      | 0.80 lb/MMBtu           |           |     | 892.0                 | 3,907.0 | 40 CFR 60.43(a)(1)     | III.D.6.                |
| NO <sub>x</sub> | Gas     | 8,760      | 0.20 lb/MMBtu           |           |     | 236.9                 | 1,037.6 | 40 CFR 60.44(a)(1)     | III.D.8.                |
| NO <sub>x</sub> | Oil     | 8,760      | 0.30 lb/MMBtu           |           |     | 355.4                 | 1,556.4 | 40 CFR 60.44(a)(2)     | III.D.8.                |

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**    **Brief Description**  
[-006]            McIntosh Unit 3 - Fossil Fuel Fired Steam Generator

| Pollutant Name  | Fuel(s)           | Hours/Year | Allowable Emissions     |           |     | Equivalent Emissions* |          | Regulatory Citation(s) | See permit condition(s) |
|-----------------|-------------------|------------|-------------------------|-----------|-----|-----------------------|----------|------------------------|-------------------------|
|                 |                   |            | Standard(s)             | lbs./hour | TPY | lbs./hour             | TPY      |                        |                         |
| PM              | Coal              | 8,760      | 0.044 lb/MMBtu          |           |     | 160.2                 | 701.5    | PSD-FL-008(B)          | III.E.5.                |
| PM              | Coal/Pet Coke     | 8,760      | 0.044 lb/MMBtu          |           |     | 160.2                 | 701.5    | PSD-FL-008(B)          | III.E.5.                |
| PM              | Coal/RDF          | 8,760      | 0.050 lb/MMBtu          |           |     | 182.0                 | 701.5    | PSD-FL-008(B)          | III.E.5.                |
| PM              | Coal/Pet Coke/RDF | 8,760      | 0.050 lb/MMBtu          |           |     | 182.0                 | 797.2    | PSD-FL-008(B)          | III.E.5.                |
| PM              | Oil               | 8,760      | 0.070 lb/MMBtu          |           |     | 254.8                 | 1,116.0  | PSD-FL-008(B)          | III.E.5.                |
| PM              | Oil/RDF           | 8,760      | 0.075 lb/MMBtu          |           |     | 273.0                 | 1,195.7  | PSD-FL-008(B)          | III.E.5.                |
| VE              | All               | 8,760      | 20% w/ 27% for 6 min/hr |           |     |                       |          | 40 CFR 60.42(a)(2)     | III.E.5.                |
| SO <sub>2</sub> | Oil               | 8,760      | 0.80 lb/MMBtu           |           |     | 2,912.0               | 12,754.6 | 40 CFR 60.43(a)(1)     | III.E.6. & 10           |
| SO <sub>2</sub> | Solid             | 8,760      | 1.2 lb/MMBtu            |           |     | 4,368.0               | 19,131.8 | 40 CFR 60.43(a)(2)     | III.E.6.                |
| NO <sub>x</sub> | Gas               | 8,760      | 0.20 lb/MMBtu           |           |     | 728.0                 | 3,188.6  | 40 CFR 60.44(a)(1)     | III.E.13.               |
| NO <sub>x</sub> | Liquid            | 8,760      | 0.30 lb/MMBtu           |           |     | 1,092.0               | 4,783.0  | 40 CFR 60.44(a)(2)     | III.E.13.               |
| NO <sub>x</sub> | Solid             | 8,760      | 0.70 lb/MMBtu           |           |     | 2,548.0               | 11,160.2 | 40 CFR 60.44(a)(3)     | III.E.13.               |

Notes:  
\* The "Equivalent Emissions" listed are for informational purposes only.

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

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-028]              McIntosh Unit 5 - 370 MW Combined Cycle Stationary Combustion Turbine

| Pollutant Name  | Fuel(s) | Hours/Year | Allowable Emissions         |           |                | Equivalent Emissions* |       | Regulatory Citation(s) | See permit condition(s) |
|-----------------|---------|------------|-----------------------------|-----------|----------------|-----------------------|-------|------------------------|-------------------------|
|                 |         |            | Standard(s)                 | lbs./hour | TPY            | lbs./hour             | TPY   |                        |                         |
| VE              | All     | 8,760      | 10%                         |           |                |                       |       | PSD-FL-245             | III.F.12.               |
| CO              | Gas     | 8,760      | 2 ppm @15% O <sub>2</sub>   |           |                | 36.8                  | 161.2 | PSD Mod. 10/8/02       | III.F.10.               |
| NO <sub>x</sub> | Gas     | 8,760      | 7.5 ppm @15% O <sub>2</sub> | 71.1      |                |                       | 281.7 | PSD-FL-245             | III.F.9.                |
| NO <sub>x</sub> | Oil     | Fuel Total | 15 ppm @15% O <sub>2</sub>  | 148.0     |                |                       | 23.7  | PSD-FL-245             | III.F.9.                |
| SO <sub>2</sub> | Gas     | 8,760      |                             | 8.0       | 38.4           |                       |       | PSD-FL-245             | III.F.11.               |
| SO <sub>2</sub> | Oil     | 8,760      | 2.5% S by weight            | 127.0     | Included above |                       |       | PSD-FL-245             | III.F.11.               |
| VOC             | All     | 8,760      | Minimized                   |           |                |                       |       | PSD Mod. 10/8/02       | III.F.13.               |

Notes:  
\* The "Equivalent Emissions" listed are for informational purposes only.

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## Table 2-1, Summary of Compliance Requirements

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

PROPOSED Permit Renewal No.: 1050004-016-AV  
Facility ID No.: 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-001]              McIntosh Unit 1 - Fossil Fuel Fired Steam Generator

| Pollutant Name<br>or Parameter | Fuel(s)  | Compliance<br>Method       | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s) |
|--------------------------------|----------|----------------------------|------------------------------|-----------------------------|-------------------------------------|-------|-------------------------|
|                                |          |                            |                              |                             |                                     |       |                         |
| VE                             | Gas      | DEP Method 9               | Renewal                      | 1-Jul                       | 60 minutes                          |       | III.A.17. & 18. & 28.   |
| VE                             | Oil      | DEP Method 9               | Annual                       | 1-Jul                       | 60 minutes                          |       | III.A.17. & 18. & 28.   |
| PM                             | Gas      | EPA Method 17, 5, 5B,or 5F | ASP No. 97-B-01              | 1-Jul                       | 1 hour                              |       | III.A.19. & 29.         |
| PM                             | Oil      | EPA Method 17, 5, 5B,or 5F | Annual                       | 1-Jul                       | 1 hour                              |       | III.A.19. & 29.         |
| SO <sub>2</sub>                | Oil      | EPA Method 6, 6A, 6B,or 6C | Annual                       | 1-Jul                       | 1 hour                              |       | III.A.15. & 20. & 27.   |
| SO <sub>2</sub>                | Oil      | 2.5% S by weight           | Each Delivery                |                             |                                     |       | III.A.15. & 20. & 21.   |
| Arsenic                        | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| Cadmium                        | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| Chromium                       | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| Lead                           | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| Total Halogens                 | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| Flash Point                    | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |
| PCBs                           | Used Oil | ASTM Standard D140-70      | Each Delivery                |                             |                                     |       | III.A.11. & 30. & 34.   |

**Notes:**

\* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.

\*\*CMS [=] continuous monitoring system

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**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

| <b>E.U. ID No.</b> | <b>Brief Description</b>     |
|--------------------|------------------------------|
| [-002]             | Diesel Engine Peaking Unit 2 |
| [-003]             | Diesel Engine Peaking Unit 3 |

| Pollutant Name<br>or Parameter | Fuel(s) | Compliance<br>Method | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s) |
|--------------------------------|---------|----------------------|------------------------------|-----------------------------|-------------------------------------|-------|-------------------------|
|                                |         |                      |                              |                             |                                     |       |                         |

Notes:  
 \* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.  
 \*\*CMS [=] continuous monitoring system

[electronic file name: 10500042.xls]

**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-004]              Gas Turbine Peaking Unit 1

| Pollutant Name<br>or Parameter | Fuel(s) | Compliance<br>Method | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s) |
|--------------------------------|---------|----------------------|------------------------------|-----------------------------|-------------------------------------|-------|-------------------------|
| VE                             | Gas     | EPA Method 9         | Renewal                      | 1-Aug                       | 30 minutes                          |       | III.C.11. & 16.         |
| VE                             | Oil     | EPA Method 9         | Annual                       | 1-Aug                       | 30 minutes                          |       | III.B.11. & 15. & 16.   |
| SO <sub>2</sub>                | Oil     | 0.5% S by weight     | Each Delivery                |                             |                                     |       | III.C.6. & 9. & 12.     |

**Notes:**

\* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.

\*\*CMS [=] continuous monitoring system

[electronic file name: 10500042.xls]

**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-005]              McIntosh Unit 2 - Fossil Fuel Fired Steam Generator

| Pollutant Name<br>or Parameter | Fuel(s) | Compliance<br>Method            | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s)    |
|--------------------------------|---------|---------------------------------|------------------------------|-----------------------------|-------------------------------------|-------|----------------------------|
|                                |         |                                 |                              |                             |                                     |       |                            |
| PM                             | Gas     | EPA Method 17, 5, or 5B         | ASP No. 97-B-01              | 23-Jun                      | 1 hour                              |       | III.D.15., 19., & 27.      |
| PM                             | Oil     | EPA Method 17, 5, or 5B         | Annual                       | 23-Jun                      | 1 hour                              |       | III.D.15., 19., & 27.      |
| VE                             | Gas     | EPA Method 9                    | Renewal                      | 23-Jun                      | 60 minutes                          | Yes   | III.D.15. & 26.            |
| VE                             | Oil     | EPA Method 9                    | Annual                       | 23-Jun                      | 60 minutes                          | Yes   | III.D.15. & 26.            |
| SO <sub>2</sub>                | Oil     | EPA Method 6, 6A, or 6C         | Annual                       | 23-Jun                      | 1 hour                              | Yes   | III.D.16., 17., 19., & 29. |
| NO <sub>x</sub>                | All     | EPA Method 7, 7A, 7C, 7D, or 7E | Annual                       | 23-Jun                      | 1 hour                              |       | III.D.15. & 19.            |

Notes:  
 \* The frequency base date is established for planning purposes only; see Rule 62-297.310, F.A.C.  
 \*\*CMS [=] continuous monitoring system

[electronic file name: 10500042.xls]

**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

**E.U. ID No.**      **Brief Description**  
[-006]              McIntosh Unit 3 - Fossil Fuel Fired Steam Generator

| Pollutant Name<br>or Parameter | Fuel(s)        | Compliance<br>Method            | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s) |
|--------------------------------|----------------|---------------------------------|------------------------------|-----------------------------|-------------------------------------|-------|-------------------------|
|                                |                |                                 |                              |                             |                                     |       |                         |
| PM                             | All Other      | EPA Method 17, 5, or 5B         | Annual                       | 23-Jun                      | 1 hour                              |       | III.E.21., 23., & 31.   |
| VE                             | Gas Only       | EPA Method 9                    | Renewal                      | 23-Jun                      | 60 minutes                          | Yes   | III.D.21. & 30.         |
| VE                             | All Other      | EPA Method 9                    | Annual                       | 23-Jun                      | 60 minutes                          | Yes   | III.D.21. & 30.         |
| SO <sub>2</sub>                | Liquid & Solid | EPA Method 6, 6A, or 6C         | Annual                       | 23-Jun                      | 1 hour                              | Yes   | III.E.21. & 23.         |
| NO <sub>x</sub>                | All            | EPA Method 7, 7A, 7C, 7D, or 7E | Annual                       | 23-Jun                      | 1 hour                              | Yes   | III.E.21. & 23.         |

Notes:  
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 \*\*CMS [=] continuous monitoring system

[electronic file name: 10500042.xls]

**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
C. D. McIntosh, Jr. Power Plant

**PROPOSED Permit Renewal No.:** 1050004-016-AV  
**Facility ID No.:** 1050004

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.


**E.U. ID No.**      **Brief Description**  
[-028]              McIntosh Unit 5 - 370 MW Combined Cycle Stationary Combustion Turbine

| Pollutant Name<br>or Parameter | Fuel(s) | Compliance<br>Method      | Testing<br>Time<br>Frequency | Frequency<br>Base<br>Date * | Min. Compliance<br>Test<br>Duration | CMS** | See permit condition(s) |
|--------------------------------|---------|---------------------------|------------------------------|-----------------------------|-------------------------------------|-------|-------------------------|
|                                |         |                           |                              |                             |                                     |       |                         |
| CO                             | All     | EPA Method 10             | Annual                       | 30-Jan                      | 60 minutes                          |       | III.F.27. & F.30.       |
| NO <sub>x</sub>                | All     | EPA Method 20             | Annual                       | 30-Jan                      | 1 hour                              | Yes   | III.F.27. & F.30.       |
| SO <sub>2</sub>                | Gas     | EPA Method 20 & ASTM      | Annual & Delivery            | 30-Jan                      | 1 hour                              |       | III.F.27. & F.29.       |
| SO <sub>2</sub>                | Oil     | EPA Method 20 & ASTM      | Annual & Delivery            | 30-Jan                      | 1 hour                              |       | III.F.27. & F.29.       |
| VOC                            | All     | EPA Methods 18 and/or 25A | Initial & Modification       | Modification                | 1 hour                              |       | III.F.27. & F.31.       |

Notes:  
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\*\*CMS [=] continuous monitoring system

[electronic file name: 10500042.xls]

**Florida's PROPOSED Permit Electronic Notification Cover Memorandum**

**TO:** Gracy Danois, U.S. EPA Region 4  
**CC:** Jeaneanne Gettle, U.S. EPA Region 4  
**THRU:** Scott Sheplak, P.E., Bureau of Air Regulation  
**FROM:** Edward J. Svec, Permit Engineer   
**DATE:** November 14, 2003  
**RE:** U.S. EPA Region 4 PROPOSED Title V Operation Permit Renewal Review

The following PROPOSED Title V operation permit and associated documents have been posted on the DEP World Wide Web Internet site for your review. Please provide any comments via Internet E-mail, within forty five (45) days of receiving this notice, to Scott Sheplak, at "SHEPLAK\_S@dep.state.fl.us".

| <u>Applicant Name</u>                                | <u>County</u> | <u>Method of Transmittal</u> | <u>Electronic File Name(s)</u> |
|--|---------------|------------------------------|--------------------------------|
| Lakeland Electric<br>C. D. McIntosh, Jr. Power Plant | Polk          | INTERNET                     | 1050004-016-AVd.zip            |

This zipped file contains the following electronic files:

sob.doc  
1050004p.doc  
10500041.xls  
10500042.xls  
1050004g.doc  
1050004u.doc  
1050004h.doc  
APPENDIX CAM