Memorandum

Florida Department of
Environmental Protection

TO: Joseph Kahn, Director, DARM
Through: Trina L. Vielhauer, Chief, BAR
From: Syed Arif, Air Permitting North Section
Bruce Thomas, Air Permitting North Section
DATE: August 8, 2008
SUBJECT: Air Permit No. 1050004-020-AV
Lakeland Electric, C.D.McIntosh, Jr. Power Plant
Title V Air Operation Permit Revision

Enclosed is the Final Permit No. 1050004-020-AV for the Title V air operation revision. The purpose of this project is to revise Title V air operation permit No. 1050004-016-AV to incorporate the specific conditions of air construction Permit No. 1050004-018-AC. The project included a newer generation set of Low NO_X burners (LNBs) and an overfire air (OFA) system on Unit 3 (EU-006) as the first phase of a project to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_X) under the Clean Air Interstate Rule (CAIR), and revises specific conditions in current Title V air operating Permit No. No. 1050004-016-AV as summarized in the Statement of Basis.

No comments were received from the EPA or the public. Comments received from Lakeland Electric are addressed in the attached Final Determination. We recommend your approval of the attached Final Notice and Permit.

Attachments

JK/tv/sa/bxt

NOTICE OF FINAL TITLE V AIR OPERATION PERMIT REVISION

PERMITTEE

Mr. Timothy Bachand, Manager of Engineering
City of Lakeland, Department of Electric Utilities
501 East Lemon Street
Lakeland, Florida 33801

Permit Project No. 1050004-020-AV
C.D. McIntosh, Jr. Power Plant
Polk County

Enclosed is the Final Permit, No. 1050004-020-AV, for the Title V air operation revision. Project No. 1050004-020-AV revises Title V air operation Permit No. 1050004-016-AV to incorporate the revisions made in air construction Permit No. 1050004-018-AC. The project included a newer generation set of low NO_X burners (LNB) and an overfire air (OFA) system on Unit 3 as the first phase of a project to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_X) under the Clean Air Interstate Rule (CAIR). The Best Available Control Technology (BACT) determination in air construction Permit No. 1050004-018-AC set limits and conditions for carbon monoxide emissions for Unit 3. These conditions have been added in Section III, Subsection E, conditions E.15. through E.27. The permit conditions following E.27. have been renumbered accordingly as summarized in the Statement of Basis. The facility is located in Polk County. This permit renewal is issued pursuant to Chapter 403, Florida Statutes (F.S.). The Draft/Proposed Permit was issued May 20, 2008. The applicant published the "Public Notice of Intent to Issue" in the Lakeland Ledger on June 13, 2008. The Department received the proof of publication on June 16, 2008. There were no comments received from Region 4, U.S. EPA, regarding the Draft/Proposed Permit. On May 22, 2008, the applicant submitted comments, which are summarized below with the Department's corresponding response.

Any party to this order (permit revision) has the right to seek judicial review of the permit revision pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Sincerely,

Trina L Vielhauer

Trina Vielhauer, Chief,
Bureau of Air Regulation

TLV/jfk/bt

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Title V Air Operation Permit Renewal (including the Final Determination and the Final Permit) was sent electronically (with Received Receipt Requested) before the close of business on 8/11/08 to the person(s) listed or as otherwise noted:

Mr. Timothy Bachand, Lakeland Electric (Timothy.Bachand@lakelandelectric.com)
Ms. Farzie Shelton, Lakeland Electric (Farzie.Shelton@lakelandelectric.com)
Mr. Bret Galbraith, Lakeland Electric (Bret.Galbraith@lakelandelectric.com)
Mr. Kennard Kosky, Golder Associates Inc. (kkosky@golder.com)
Ms. Gracy Danois, U.S. EPA Region 4: danois.gracy@epa.gov
Ms. Cindy Zhang-Torres, Southwest District Office (Cindy.Zhang-Torres@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Barbara J. Tinsley 8/11/08

(Clerk) (Date)

FINAL DETERMINATION

Title V Air Operation Permit Revision
Permit No. 1050004-020-AV
City of Lakeland, Department of Electric Utilities
C.D. McIntosh, Jr. Power Plant

I. Comments.

There were no comments on the Draft/Proposed permit received from EPA Region 4 during their 45-day review period. On May 22, 2008, the applicant submitted comments, which are summarized below with the Department's corresponding response.

1. *Comment*: The reference to the Clean Air Mercury Rule in the Statement of Basis should be deleted due to recent court decisions.

Response: The reference has been removed.

2. *Comment:* Specific Condition E.17. of Section 3 incorrectly references Specific Condition E.11. It should reference Specific Condition E.21.

Response: The reference has been changed accordingly.

3. *Comment:* Specific Condition E.24. incorrectly references Appendix SC.

Response: The reference has been removed.

4. *Comment:* Specific Condition E.27. does not have a permit citation or reference.

Response: A rule reference to Rule 62-4.070(3), F.A.C. has been added.

5. The applicant requested a modification to Specific Condition E.27. to allow monthly Unit 3 CO, NO_x, and heat input data to be kept at the facility in lieu of sending monthly reports to the Department.

Response: The data may be used in conjunction with the Title V permit renewal. No change was made.

6. The application requested sequential numbering of the provisions of Specific Condition E.42.

Response: The provisions have been sequentially renumbered.

II. Conclusion.

Only the minor revisions described above were made to the final permit. The final action of the Department is to issue the permit with the changes described above.

PROJECT DESCRIPTION

The purpose of this project is to revise Title V air operation permit No. 1050004-016-AV to incorporate the specific conditions of air construction Permit No. 1050004-018-AC. The project included a newer generation set of Low NO_X burners (LNB) and an overfire air (OFA) system on Unit 3 (EU-006) as the first phase of a project to provide full flexibility in implementing the federal cap and trade program for nitrogen oxides (NO_X) under the Clean Air Interstate Rule (CAIR).

FACILITY DESCRIPTION

This facility consists of three fossil fuel fired steam generators, two diesel powered generators, and two gas turbines.

McIntosh Unit 1 is a forced draft boiler rated at a nominal load of 90 megawatts (MW). The unit is fired with natural gas at a maximum heat input rate of 985 million British Thermal Units (Btu) 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. 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. Compliance Assurance Monitoring (CAM) does not apply.

Diesel Engine Peaking Units 2 and 3 are diesel fired internal combustion engines rated at 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 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 with 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. Gas Turbine Peaking Unit 1 began commercial service in 1973. CAM does not apply.

McIntosh Unit 2 is a nominal 114.7 megawatt 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 dry bottom wall-fired fossil fuel 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_X 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 mode with a Heat Recovery Steam Generator (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.

PRIMARY REGULATORY REQUIREMENTS

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

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) Part 60.

Siting: The facility was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

APPLICABLE REGULATIONS

In addition to federal rules above, this facility is subject to the following state rules:

APPLICABLE REGULATIONS	EU ID
Rule 62-4, Permitting Requirements	001, 002, 003, 004, 005, 006, 028
Rule 62-17, Electrical Power Plant Siting	
Rule 62-204, Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference	
Rule 62-210, Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms	
Rule 62-212, Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER	
Rule 62-213, Title V Air Operation Permits for Major Sources of Air Pollution	
Rule 62-214, Acid Rain Program Requirements	
Rule 62-296, Emission Limiting Standards	
Rule 62-297, Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures	

PROJECT REVIEW

The Best Available Control Technology (BACT) determination in air construction Permit No. 1050004-018-AC set limits and conditions for carbon monoxide emissions for Unit 3. These conditions have been added in Section III, Subsection E, conditions E.15. through E.27. The permit conditions following E.27. have been renumbered accordingly.

COMMENTS

There were no comments on the Draft/Proposed permit received from EPA Region 4 during their 45-day review period. On May 22, 2008, the applicant submitted comments, which are summarized below with the Department's corresponding response.

1. *Comment*: The reference to the Clean Air Mercury Rule in the Statement of Basis should be deleted due to recent court decisions.

Response: The reference has been removed.

2. *Comment:* Specific Condition E.17. of Section 3 incorrectly references Specific Condition E.11. It should reference Specific Condition E.21.

Response: Specific Condition E.17. has been changed as follows:

E.17. Continuous Compliance with CO limits. Upon certification of the CO CEMS pursuant to condition ~~E.11~~. E.21., compliance with the 30 operating day rolling average shall be demonstrated using data collected from the required CEMS. [Rule 62-4.070(3), F.A.C.]

3. *Comment:* Specific Condition E.24. incorrectly references Appendix SC.

Response: The reference has been removed.

4. *Comment:* Specific Condition E.27. does not have a permit citation or reference.

Response: A rule reference to Rule 62-4.070(3), F.A.C. has been added.

5. The applicant requested a modification to Specific Condition E.27. to allow monthly Unit 3 CO, NO_x, and heat input data to be kept at the facility in lieu of sending monthly reports to the Department.

Response: The data may be used in conjunction with the Title V permit renewal. No change was made.

6. The application requested sequential numbering of the provisions of Specific Condition E.42.

Response: The provisions have been sequentially renumbered as follows:

E.29.E.42. 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.~~ 1. 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.~~ 2. 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.~~ 3. 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.~~ 4. 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.~~ 5. 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]

CONCLUSION

This project revises Title V air operation permit No. 1050004-016-AV, which was issued on January 1, 2004. This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C. In accordance with the terms and conditions of this permit, the above named permittee is hereby authorized to operate the facility as shown on the application and approved drawings, plans, and other documents, on file with the permitting authority.

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

Title V Air Operation Permit

Final Permit Project No.: 1050004-020-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
13051 N. Telecom Parkway
Temple Terrace, Florida 33637
Telephone: 813/632-7600
Fax: 813/632-7665

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

PERMITTEE:
City of Lakeland, Department of Electric Utilities
501 East Lemon Street
Lakeland, Florida 33801-5079

Permit No. 1050004-020-AV
C.D. McIntosh, Jr. Power Plant
Facility ID No. 1050004
Title V Air Operation Permit

The purpose of this permit is to revise Title V air operation Permit No. 1050004-016-AV to incorporate air construction Permit No. PSD-FL-387 (Project No. 1050004-018-AC) which included installation of a newer generation set of low NO_X burners (LNB) and an overfire air (OFA) system on Unit 3 (EU-006). The existing facility is located at 3030 East Lake Parker Drive, Lakeland, Florida in Polk County. The map coordinates are: Zone 17, 409.0 km East and 3106.2 km North; Latitude: 28° 04' 50" North and Longitude: 81° 55' 32" West. The Title V air operation permit 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 drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Effective Date: January 1, 2004
Title V Permit Revision Effective Date: August 8, 2008
Renewal Application Due Date: July 1, 2008
Expiration Date: December 31, 2008

Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/sa/bxt

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

Carbon Monoxide

E.15. Carbon Monoxide (CO):

a. Emissions of CO shall not exceed 0.20 lb/mmBtu heat input on a 30-operating day rolling average as demonstrated by the required CEMS. This CO emission limit may be adjusted downward to make this limit more stringent based on the Department's reassessment of BACT during the subsequent phase of this project involving installation of selective catalytic reduction.

b. Emissions of CO shall not exceed 0.20 lb/mmBtu on a 3-hr average during the initial compliance demonstration.

[62-210.200 (BACT) and 62-212.400(PSD), F.A.C.]

E.16. Emissions Limits Subject to Revision: Emissions of CO from Unit 3 shall not exceed the limitations specified in this permit. Based on results of compliance tests and continuous monitoring data, the Department will reassess the BACT determination in conjunction with the subsequent phase of the project which will include installation of selective catalytic reduction. The emission limit may be adjusted downward to make this limit more stringent provided that overall control attained for all air pollutants including CO, SO_2, NO_X, PM/PM_{10}, sulfuric acid mist, and VOC is optimized. Such revision shall be based on data that represents a full range of operating conditions and a representative period of time. Such revision, if required by the Department, shall be in the form of a federally enforceable permit and shall be publicly noticed by the permittee.
[Rules 62-4.070(3), and 62-212.400(7)(a), F.A.C.]

EMISSIONS COMPLIANCE DEMONSTRATION

E.17. Continuous Compliance with CO limits: Upon certification of the CO CEMS pursuant to condition E.21, compliance with the 30 operating day rolling average shall be demonstrated using data collected from the required CEMS. [Rule 62-4.070(3), F.A.C.]

E.18. Initial Compliance Demonstration: Within 60 days of commencing operation, following installation of the Low-NO_X burners and overfire air system, tests shall be conducted to determine emissions of CO and NO_X. Tests shall be conducted between 90% and 100% of permitted capacity while firing a coal and petcoke blend or a blend of coal, petcoke and refuse derived fuel. Tests shall consist of three, 1-hour test runs.
[Rule 62-297.310(7)(a)1, F.A.C.]

E.19. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions (Instrumental).
10	Determination of Carbon Monoxide Emissions

The methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for compliance testing unless prior written approval is received from the administrator

of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. [Rules 62-204.800, F.A.C. and 40 CFR 60, Appendix A]

E.20. Test Results: Compliance test results shall be submitted to the Department's Southwest District Office no later than 45 days after completion of the last test run. [Rule 62-297.310(8), F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

E.21. Performance Specifications and Quality Assurance:

The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 180 calendar days of commencing operation following installation of the Low-NO_X burners and overfire air system. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

[Rules 62-4.070(3) and 62-210.200(BACT), F.A.C.]

E.22. CEMS Data Requirements for CO BACT Standard:

a. *Data Collection:* The CO CEMS shall monitor and record emissions during all operations and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments, and span adjustments.

b. *Operating Hours and Operating Days:* An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Any day with at least one operating hour for an emissions unit is an operating day for that emission unit.

c. *Valid Hourly Averages:* The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.

   1) Hours that are not operating hours are not valid hours.

   2) For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."

d. *Rolling 30-day average:* Compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 29 operating days.

e. *Monitor Availability:* The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-4.070(3) and 62-210.200(BACT), F.A.C.]

CEMS FOR ANNUAL EMISSIONS REPORTING

E.23. CEMS Annual Emissions Requirement: The owner or operator shall use data from the CO CEMS when calculating annual emissions for purposes of computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for purposes of computing emissions pursuant to the reporting requirements of Rule 62-210.370(3), F.A.C. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit. [Rules 62-210.200, and 62-210.370(3), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

E.24. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to the Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

E.25. Excess Emissions Reporting:

a. *Malfunction Notification:* If emissions in excess of a standard (subject to the specified averaging period) occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. The Department may request a written summary report of the incident.

b. *SIP Quarterly Report:* Within 30 days following the end of each calendar-quarter, the permittee shall submit a report to the Compliance Authority summarizing periods of CO emissions in excess of the BACT permit standard following the NSPS format in 40 CFR 60.7(c), Subpart A. In addition, the report shall summarize the CO CEMS system monitor availability for the previous quarter.

c. *NSPS Reporting:* Within 30 days following the calendar quarter, the permittee shall submit the written reports required by 40 CFR 60 Subpart D (Standards of Performance for Fossil-Fuel Fired Steam Generators) for the previous semi-annual period to the Compliance Authority.

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

[Rules 62-4.130, 62-204.800, 62-210.700(6) and 62-212.400(BACT), F.A.C. and 40 CFR 60.7]

E.26. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating hours and emissions from this facility in accordance with 62-210.370. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

E.27. Monthly CO CEMS Report: Upon certification of the CO CEMS the permittee shall submit, on a monthly basis, a report in electronic file format which includes Unit 3 CO, NO_X, and heat input data. The report shall be submitted by the 15th of each month by mailing a compact disc to the Department's Bureau of Air Regulation Title V Permitting Section and shall include all hourly readings from the previous month. Alternatively, upon contacting the Bureau's project engineer, the file may be emailed to the appropriate BAR personnel. [Rule 62-4.070(3), F.A.C.]

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.28. 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.29. 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.30. 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.31. 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.32. 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.33. 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.34. The owner or operator shall determine compliance with the particulate matter, SO_2, and NO_X standards in 40 CFR 60.42, 60.43, and 60.44 as follows:
(1) The emission rate (E) of particulate matter, SO_2, or NO_X 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).
$\% O_2$ = oxygen concentration, percent dry basis.
F_d = factor as determined from Method 19.

(2) Method 5 shall be used to determine the particular 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_2 concentration ($\%O_2$). The O_2 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_2 concentration for the run shall be the arithmetic mean of all the individual O_2 sample concentrations at each traverse point.
(iii) If the particulate run has more than 12 traverse points, the O_2 traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O_2 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_2 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_2 concentration ($\%O_2$). The O_2 sample shall be taken simultaneously with, and at the same point as, the SO_2 sample. The SO_2 emission rate shall be computed for each pair of SO_2 and O_2 samples. The SO_2 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 NOX concentration.
(i) The sampling site and location shall be the same as for the SO_2 sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.
(ii) For each NO_x sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O_2 concentration ($\%O_2$). The sample shall be taken simultaneously with, and at the same point as, the NO_x sample.
(iii) The NO_x emission rate shall be computed for each pair of NO_x and O_2 samples. The NO_x 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.35. 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.36. 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_2 and NO_x may be determined by using the Fc factor, provided that the following procedure is used:

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

$E = C F_c (100 / \% CO_2)$

where:
E = emission rate of pollutant, ng/J (lb/million Btu).
C = concentration of pollutant, ng/dscm (lb/dscf).
% CO_2 = carbon dioxide concentration, percent dry basis.
F_c = factor as determined in appropriate sections of Method 19.

(ii) If and only if the average F_c 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_2 and CO_2 concentration according to the procedures in 40 CFR 60.46(b)(2)(ii), (4)(ii), or (5)(ii). Then if F_o (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F_o value, as determined from the average values of F_d and F_c in Method 19, i.e., $F_{oa} = 0.209 (F_{da} / F_{ca})$, 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 °C (320 °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 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 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 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 O_2 concentration ($\%O_2$) 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.37. 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.38. 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.39. 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.40. 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.41. 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.42. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

1. 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.

2. 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.

3. 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.
4. 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.
5. 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.43. 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.44. 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.45. 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.46. 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.47. 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.48. 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_2 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_c and % CO_2 are determined under 40 CFR 60.45(f).

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

E.49. 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 4.15×10^{4} M ng/dscm per ppm (2.59×10^{-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_2, % CO_2 = oxygen or carbon dioxide volume (expressed as percent), determined with equipment specified under 40 CFR 60.45(a).

(4) F, F_c = 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_c), respectively. Values of F and F_c 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_2 /J (1,980 scf CO_2 /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_2 /J (1,810 scf CO_2 /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_2 /J (1,430 scf CO_2 /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_2 /J (1,040 scf CO_2 /million Btu) for natural gas, 0.322×10^{-7} scm CO_2 /J (1,200 scf CO_2/million Btu) for propane, and 0.338×10^{-7} scm CO_2 /J (1,260 scf CO_2 /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_c factor (scm CO_2 /J, or scf CO_2 /million Btu) on either basis in lieu of the F or F_c factors specified in 40 CFR 60.45(f)(4):

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

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

(SI units)

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

(English units)

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

(SI units)

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

(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_c 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_c 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_i = the fraction of total heat input derived from each type of fuel (e.g. natural gas, bituminous coal, wood residue, etc.)
F_i or $(F_c)_i$ = the applicable F or F_c 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.50. 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_2 reduction. [PSD-FL-008(B)]

Recordkeeping and Reporting Requirements

E.51. 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.52. 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.53. 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.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 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.55. 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.56. 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.57. Use of SO_2 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_2 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.58. 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.]

Friday, Barbara

To: timothy.bachand@lakelandelectric.com; Shelton, Farzie; Bret.Galbraith@lakelandelectric.com; 'KKosky@Golder.com'; Zhang-Torres

Cc: Thomas, Bruce X.; Gibson, Victoria

Subject: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the document(s) provided in this email; this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

This is the official notification of the Written Notice of Intent to Issue Air Permit and its associated documents for the following project:

Attention: Bruce Thomas

Owner/Company Name: LAKELAND ELECTRIC
Facility Name: C.D. MCINTOSH, JR. POWER PLANT
Project Number: 1050004-020-AV
Permit Status: FINAL
Permit Activity: PERMIT REVISION
Facility County: POLK

Click on the following link to access the permit project documents:
http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1050004.020.AV.F_pdf.zip

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

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

Thank you,

Barbara Friday

Bureau of Air Regulation

(850)921-9524

Friday, Barbara

From: Bachand, Timothy [Timothy.Bachand@lakelandelectric.com]
To: Friday, Barbara
Sent: Tuesday, August 19, 2008 10:58 AM
Subject: Read: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To: Timothy.Bachand@lakelandelectric.com
Subject:

was read on 8/19/2008 10:58 AM.

Friday, Barbara

From: Bachand, Timothy [Timothy.Bachand@lakelandelectric.com]
Sent: Tuesday, August 19, 2008 10:59 AM
To: Friday, Barbara
Subject: RE: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Received

Timothy L. Bachand, P.E.

Manager of Engineering - Production

863.834.6633 office

863.838.4229 cell

From: Friday, Barbara [mailto:Barbara.Friday@dep.state.fl.us]
Sent: Monday, August 11, 2008 11:32 AM
To: Bachand, Timothy; Shelton, Farzie; Galbraith, Bret; KKosky@Golder.com; Zhang-Torres
Cc: Thomas, Bruce X.; Gibson, Victoria
Subject: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

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Facility Name: C.D. MCINTOSH, JR. POWER PLANT Project Number: 1050004-020-AV Permit Status: FINAL Permit Activity: PERMIT REVISION Facility County: POLK

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Thank you,

Barbara Friday

Bureau of Air Regulation

(850)921-9524

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey <http://survey.dep.state.fl.us/?refemail=Barbara.Friday@dep.state.fl.us> . Thank you in advance for completing the survey.

Friday, Barbara

From: System Administrator
To: Gibson, Victoria; Zhang-Torres; Thomas, Bruce X.
Sent: Monday, August 11, 2008 11:32 AM
Subject: Delivered: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To:	'timothy.bachand@lakelandelectric.com'; 'Shelton, Farzie'; 'Bret.Galbraith@lakelandelectric.com'; 'KKosky@Golder.com'; Zhang-Torres
Cc:	Thomas, Bruce X.; Gibson, Victoria
Subject:	Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV
Sent:	8/11/2008 11:32 AM

was delivered to the following recipient(s):

Gibson, Victoria on 8/11/2008 11:32 AM
Zhang-Torres on 8/11/2008 11:32 AM
Thomas, Bruce X. on 8/11/2008 11:32 AM

Friday, Barbara

From: Zhang-Torres
To: Friday, Barbara
Sent: Monday, August 11, 2008 11:33 AM
Subject: Read: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To:	'timothy.bachand@lakelandelectric.com'; 'Shelton, Farzie'; 'Bret.Galbraith@lakelandelectric.com'; 'KKosky@Golder.com'; Zhang-Torres
Cc:	Thomas, Bruce X.; Gibson, Victoria
Subject:	Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV
Sent:	8/11/2008 11:32 AM

was read on 8/11/2008 11:33 AM.

Friday, Barbara

From: Gibson, Victoria
To: Friday, Barbara
Sent: Monday, August 11, 2008 11:33 AM
Subject: Read: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To:	'timothy.bachand@lakelandelectric.com'; 'Shelton, Farzie'; 'Bret.Galbraith@lakelandelectric.com'; 'KKosky@Golder.com'; Zhang-Torres
Cc:	Thomas, Bruce X.; Gibson, Victoria
Subject:	Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV
Sent:	8/11/2008 11:32 AM

was read on 8/11/2008 11:33 AM.

Friday, Barbara

From: Galbraith, Bret [Bret.Galbraith@lakelandelectric.com]
To: Friday, Barbara
Sent: Monday, August 11, 2008 11:40 AM
Subject: Read: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To: Bret.Galbraith@lakelandelectric.com
Subject:

was read on 8/11/2008 11:40 AM.

Friday, Barbara

From: Mail Delivery System [MAILER-DAEMON@sophos.golder.com]
Sent: Monday, August 11, 2008 11:51 AM
To: Friday, Barbara
Subject: Successful Mail Delivery Report

Attachments: Delivery report; Message Headers


Delivery report.txt (470 B)


Message Headers.txt (2 KB)

This is the mail system at host sophos.golder.com.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<KKosky@Golder.com>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent 48A05FCE_11514_4_38 7872D116F6FF

Friday, Barbara

From: Thomas, Bruce X.
To: Friday, Barbara
Sent: Monday, August 11, 2008 12:37 PM
Subject: Read: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Your message

To:	'timothy.bachand@lakelandelectric.com'; 'Shelton, Farzie'; 'Bret.Galbraith@lakelandelectric.com'; 'KKosky@Golder.com'; Zhang-Torres
Cc:	Thomas, Bruce X.; Gibson, Victoria
Subject:	Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV
Sent:	8/11/2008 11:32 AM

was read on 8/11/2008 12:37 PM.

Friday, Barbara

From: Galbraith, Bret [Bret.Galbraith@lakelandelectric.com]
Sent: Monday, August 11, 2008 3:46 PM
To: Friday, Barbara
Subject: RE: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

Thank you; I've received that attached documents.

Bret Galbraith, E.I.

Environmental Permitting

Lakeland Electric

501 E. Lemon St.

Lakeland, FL 33801

office: (863) 834-8180

cell: (813) 351-0149

fax: (863) 834-8187

Bret.Galbraith@lakelandelectric.com <mailto:Bret.Galbraith@lakelandelectric.com>

From: Friday, Barbara [mailto:Barbara.Friday@dep.state.fl.us]
Sent: Monday, August 11, 2008 11:32 AM
To: Bachand, Timothy; Shelton, Farzie; Galbraith, Bret; KKosky@Golder.com; Zhang-Torres
Cc: Thomas, Bruce X.; Gibson, Victoria
Subject: Notice of FINAL PERMIT REVISION ISSUANCE: C.D. MCINTOSH, JR. POWER PLANT; 1050004-020-AV

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Thank you,

Barbara Friday

Bureau of Air Regulation

(850)921-9524

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