

TO: Howard L. Rhodes

FROM: *for* Clair H. Fancy

DATE: August 21, 2001

SUBJECT: FINAL Permit Revision No.: 1050003-009-AV  
Lakeland Electric  
Charles M. Larsen Memorial Power Plant

This permit is a revision to the initial Title V air operation permit for the subject facility. The subject of the permit revision is to incorporate the use of an inlet fogger system authorized by a previous construction permit on the gas turbine designated as Unit 8, Facility I.D.# -008.

No comments were received during the thirty day comment period.

No comments or objections were received from Region 4, U.S. EPA regarding the PROPOSED permit.

I recommend your signature.

Attachment

CHF/es

**NOTICE OF FINAL PERMIT**

In the Matter of an  
Application for Permit by:

Mr. Roger D. Haar  
City Manager  
Lakeland Electric  
501 East Lemon Street  
Lakeland, Florida 33801-5079

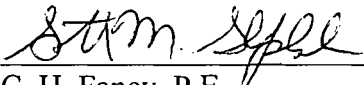
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FINAL Permit Revision No.: 1050003-009-AV  
Charles Larsen Memorial Power Plant

Enclosed is FINAL Permit Revision Number 1050003-009-AV for the operation of the Charles Larsen Memorial Power Plant located at 2002 East U.S. Highway 92, Lakeland, Polk County, issued pursuant to Chapter 403, Florida Statutes (F.S.).

Any party to this order (permit) has the right to seek judicial review of the permit 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 permitting authority 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 permitting authority.

Executed in Tallahassee, Florida.

  
C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 8/30/01 to the person(s) listed or as otherwise noted:

Mr. Roger D. Haar, Lakeland Electric \*  
Ms. Farzie Shelton, Lakeland Electric  
Mr. Bill Thomas, PE, FDEP, SWD  
USEPA, Region 4 (INTERNET E-mail Memorandum)

Clerk Stamp

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

(Clerk)

(Date)

8/30/01 cc: Ed Irec  
Reading File  
Clerk and mailed  
on 8/30/01

Barbara J. Friday 8/30/01

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

## 1. Article Addressed to:

Mr. Roger D. Haar  
City Manager  
Lakeland Electric  
501 East Lemon Street  
Lakeland, FL 33801-5079

## 2. Article Number (Copy from service label)

7000 0600 0021 6524 2328

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

Bonnie Brown 9-4-01

C. Signature

Bonnie Brown

☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

## 3. Service Type

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## 4. Restricted Delivery? (Extra Fee)

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PS Form 3800, July 1999

Domestic Mail Only

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Mr. Roger D. Haar

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Mr. Roger D. Haar

Street, Apt. No., or PO Box No.

501 East Lemon Street

City, State, ZIP+4

Lakeland, Florida 33801-5079

PS Form 3800, July 1999

See Reverse for Instructions

9228 2328 4259 6524 0021 0600 7000

## **STATEMENT OF BASIS**

Lakeland Electric  
Charles Larsen Memorial Power Plant  
**Facility ID No.:** 1050003  
Polk County

Title V Air Operation Permit Revision  
FINAL Title V Permit Revision No.: 1050003-009-AV

The initial Title V air operation permit went final on August 18, 1997 and effective on January 1, 1998. This Title V air operation permit with revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The subject of this permit revision is to incorporate the ability to operate an inlet fogger system on the gas turbine designated as Unit 8, Emissions Unit I.D. No. -008.

## **FINAL PERMIT DETERMINATION**

FINAL Permit No.: 1050003-009-AV

Page 1 of 1

### **I. Comment(s).**

No comments were received on the PROPOSED Title V Permit Revision.

### **II. Conclusion.**

Since no comments were received, the PROPOSED Title V Air Operation Permit Revision becomes the FINAL Title V Air Operation Permit Revision.

Lakeland Electric & Water Utilities  
Charles Larsen Memorial Power Plant  
**Facility ID No.:** 1050003  
Polk County

Initial Title V Air Operation Permit  
**FINAL Title V Permit Revision No.:** 1050003-009-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: 850/488-1344  
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

Initial Title V Air Operation Permit  
**FINAL Title V Permit Revision No.: 1050003-009-AV**

**Table of Contents**

<b>Section</b>	<b>Page Number</b>
Placard Page .....	1
I. Facility Information .....	2 - 3
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s).	
C. Relevant Documents.	
II. Facility-wide Conditions .....	4 - 5
III. Emissions Unit(s) and Conditions	
A. Emissions Unit -003 Fossil Fuel Steam Generator #6.....	6 - 11
B. Emissions Unit -004 Fossil Fuel Steam Generator #7.....	12 - 17
C. Emissions Units -005 Peaking Gas Turbine #3.....	18 - 23
-006 Peaking Gas Turbine #2	
-007 Peaking Gas Turbine #1	
D. Emissions Unit -008 Combined Cycle Combustion Turbine.....	24 - 33
E. Common Conditions .....	34 - 39
IV. Acid Rain Part	
A. Acid Rain, Phase II.....	40 - 41





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 & Water Utilities  
501 East Lemon Street  
Lakeland, Florida 33801-5079

**FINAL Title V Permit Revision No.:** 1050003-009-AV

**Facility ID No.:** 1050003

**SIC Nos.:** 49, 4911

**Project:** Title V Air Operation Permit Revision

This permit revision is for the operation of an inlet fogging system on Unit 8 at the Charles Larsen Memorial Power Plant. This facility is located at 2002 East Highway 92, Lakeland, Polk County; UTM Coordinates: Zone 17, 408.9 km East and 3102.5 km North; Latitude: 28° 2' 56" North and Longitude: 81° 55' 25" West.

**STATEMENT OF BASIS:** This 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 perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

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

Appendix U-1, List of Unregulated Emissions Units and/or Activities

Appendix I-1, List of Insignificant Emissions Units and/or Activities

Appendix TV-3, Title V Conditions (version dated 04/30/99)

APPENDIX SS-1, STACK SAMPLING FACILITIES (10/07/96)

FIGURE 1 - SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND

MONITORING SYSTEMS PERFORMANCE REPORT (40 CFR 60; July, 1996)

Phase II Acid Rain Application/Compliance Plan received December 26, 1995

Alternate Sampling Procedure: ASP Number 97-B-01

**Effective Date:** January 1, 1998

**Title V Permit Revision Effective Date:** July 18, 2001

**Renewal Application Due Date:** July 5, 2002

**Expiration Date:** December 31, 2002

Howard L. Rhodes, Director,  
Division of Air Resources Management

HLR/sms/es

**Section I. Facility Information.****Subsection A. Facility Description.**

This facility consists of two fossil fuel-fired steam generators, one combined cycle combustion turbine and three simple cycle gas turbine peaking units. Natural gas and oil are the primary fuels. Also included in this permit are miscellaneous unregulated/exempt emissions units and/or activities.

Based on the initial Title V permit application received June 14, 1996, this facility is not a major source of HAPs.

**Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions.**

## Regulated Emissions Units and/or Activities

**E.U. ID**

<b><u>No.</u></b>	<b><u>Brief Description</u></b>
-003	Fossil Fuel Fired Steam Generator #6
-004	Fossil Fuel Fired Steam Generator #7
-005	Peaking Gas Turbine #3
-006	Peaking Gas Turbine #2
-007	Peaking Gas Turbine #1
-008	Combined Cycle Combustion Turbine

## Unregulated Emissions Units and/or Activities

**E.U. ID**

<b><u>No.</u></b>	<b><u>Brief Description</u></b>
-009	Emergency generators
-010	General purpose engines
-011	Surface coatings with VOC content >5% by volume
-012	Sand Blasting
-013	Parts Washing

*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 / ID Number Changes

These documents are on file with the permitting authority:

Initial Title V Permit Application received June 14, 1996

Additional Information Request dated October 16, 1996

Additional Information Response received October 16, 1996

Update to Initial Title V Application dated February 7, 1997

Letter received May 13, 1997 from Ms. Farzie Shelton

Letter received June 17, 1997 from Ms. Farzie Shelton

Title V Permit Revision Application received November 15, 2000

Notification of change of Responsible Official received February 1, 2001

**Section II. Facility-wide Conditions.****The following conditions apply facility-wide:**

1. APPENDIX TV-3, TITLE V CONDITIONS, is a part of this permit.  
{Permitting note: APPENDIX TV-3, 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. The permittee shall not 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. Prevention of Accidental Releases Section 112(r) of CAA. If required by 40 CFR 68 the permittee shall submit to the implementing agency:
  - a. a risk management plan (RMP) when, and if, such requirement becomes applicable, and
  - b. certification forms and/or RMPs according to the promulgated rule schedule.[40 CFR 68]
4. 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.]
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. 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 permittee shall keep containers of paint solvents and thinners closed.  
[Rule 62-296.320(1)(a), F.A.C.]
7. 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.  
[Rule 62-296.320(4)(b)1. & 4., F.A.C.]

**8. Not federally enforceable.** The permittee shall take reasonable precautions to prevent emissions of unconfined particulate matter at this facility include: maintenance of paved areas, regular mowing of grass and care of vegetation, and limiting access to plant property of unnecessary vehicles.

[Rule 62-296.320(4)(c)2., F.A.C.,]

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

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

**10. Statement of Compliance.** The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year.

{See condition 51., APPENDIX TV-3, TITLE V CONDITIONS}

[Rule 62-214.420(11), F.A.C.]

**11.** 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

**12.** 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 EPRCA Enforcement Branch, Air Enforcement Section

61 Forsyth Street

Atlanta, Georgia 30303

Telephone: 404/562-9055

Fax: 404/562-9164

**Section III. Emissions Units.****Subsection A. This section addresses the following emissions unit.****E.U. ID****No.            Brief Description**

-003            Fossil Fuel Fired Steam Generator #6

Fossil fuel fired steam generator #6 is a nominal 25 megawatt (electric) steam generator designated as Charles Larsen Memorial Power Plant Unit #6. This emission unit is fired on No. 6 fuel oil at a maximum heat input of 305.9 MMBtu per hour, or natural gas at a maximum heat input of 286.5 MMBtu per hour. Unit #6 began commercial service in 1959.

{Permitting note(s): The emissions unit is regulated under 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>
6	286.5 (HHV)	Natural Gas
	305.9 (HHV)	No. 6 Fuel Oil

Compliance with the heat input limits shall be determined based on the higher heating value (HHV) of the fuels used and fuel flow meter data.

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

**A.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **A.21.**  
[Rule 62-297.310(2), F.A.C.]

**A.3. Methods of Operation. Fuel(s).**

a. Startup: The only fuels allowed to be burned are propane, No. 2 fuel oil, natural gas, No. 6 fuel oil, or any combination of these fuels.

b. Normal: The only fuels allowed to be burned are natural gas, No. 6 fuel oil, or a combination of natural gas and No. 6 fuel oil. When a blend of liquid and gaseous fuel is fired, the heat input is prorated based on the percent heat input of each fuel.

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

**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.}

**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 2.50 percent, by weight. See specific condition A.20.  
[Rule 62-296.405(1)(e)3., F.A.C.; and, requested in a letter dated February 7, 1997.]

**Excess Emissions**

**A.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.]

**A.12.** 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.13.** 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.14. 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.19. and A.20.

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

**A.15.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

**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.16. 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.17.

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



**A.17. 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.18. 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.19. 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 exceedences 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 upon each fuel delivery.** See specific conditions A.10. and A.20.

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

**A.20.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition.

[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.21. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operating at 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.

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

**A.22. General Compliance Testing.** 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.

[Rule 62-297.310(7)(a)2., F.A.C.]

**A.23.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

**A.24.** Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

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

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

**A.25. Cold Standby.** If the emissions unit is on cold standby when the annual compliance test is required, the compliance test may be postponed until after startup. Compliance testing shall be conducted within 30 days of startup.

[Rule 62-210.300(2)(a)4., F.A.C.; and, AO 53-175871.]

**A.26.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

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

**A.27.** 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.28.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

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

**Subsection B. This section addresses the following emissions unit.**

**E.U. ID**

<b><u>No.</u></b>	<b><u>Brief Description</u></b>
-004	Fossil Fuel Fired Steam Generator #7

Fossil fuel fired steam generator #7 is a nominal 50 megawatt (electric) steam generator designated as Charles Larsen Memorial Power Plant Unit #7. This emission unit is fired on No. 6 fuel oil at a maximum heat input of 597.6 MMBtu per hour, or natural gas at a maximum heat input of 615.6 MMBtu per hour. Unit #7 began commercial service in 1966.

{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**

**B.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>
7	615.6 (HHV)	Natural Gas
	597.6 (HHV)	No. 6 Fuel Oil

Compliance with the heat input limits shall be determined based on the higher heating value (HHV) of the fuels used and fuel flow meter data.

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

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **B.21.**  
[Rule 62-297.310(2), F.A.C.]

**B.3. Methods of Operation. Fuel(s).**

a. Startup: The only fuels allowed to be burned are propane, No. 2 fuel oil, natural gas, No. 6 fuel oil, or any combination of these fuels.

b. Normal: The only fuels allowed to be burned are natural gas, No. 6 fuel oil, or a combination of natural gas and No. 6 fuel oil. When a blend of liquid and gaseous fuel is fired, the heat input is prorated based on the percent heat input of each fuel.

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

**B.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.}

**B.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.]

**B.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.]

**B.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.]

**B.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.]

**B.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.]

**B.10. Sulfur Dioxide - Sulfur Content.** The No. 6 fuel oil sulfur content shall not exceed 2.50 percent, by weight. See specific condition **B.20.**  
[Rule 62-296.405(1)(e)3., F.A.C.; and, requested in a letter dated February 7, 1997.]

**Excess Emissions**

**B.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.]

**B.12.** 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.]

**B.13.** 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.14. 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 **B.10.**, **B.19.** and **B.20.**

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

**B.15.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

**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.}

**B.16. 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 **B.17.**

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

**B.17. 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.]

**B.18. 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.]

**B.19. 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 exceedences 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 upon each fuel delivery.** See specific conditions **B.10. and B.20.**

[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.; and, AO 53-175870]

**B.20.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest edition.

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

**B.21. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operating at 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.

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

**B.22. General Compliance Testing.** 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.

[Rule 62-297.310(7)(a)2., F.A.C.]



**B.23.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

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

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

**B.24.** Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

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

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

**B.25. Cold Standby.** If the emissions unit is on cold standby when the annual compliance test is required, the compliance test may be postponed until after startup. Compliance testing shall be conducted within 30 days of startup.

[Rule 62-210.300(2)(a)4., F.A.C.]

**B.26.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

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

**B.27.** 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.]

**B.28.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

[Rule 62-296.405(e)3., F.A.C.]

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

**Subsection C. This section addresses the following emissions units.**

**E.U. ID**

<b><u>No.</u></b>	<b><u>Brief Description</u></b>
-005	Peaking Gas Turbine #3
-006	Peaking Gas Turbine #2
-007	Peaking Gas Turbine #1

The gas turbine peaking units are fired with natural gas, or No. 2 fuel oil with a maximum sulfur content of 0.50 percent by weight. The maximum heat input rate for each gas turbine is 209 MMBtu per hour and each unit is rated at 11.5 megawatts (electric). Emissions from the gas turbines are uncontrolled. Turbines #1, #2 and #3 began commercial service in 1962.

{Permitting notes: These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required. These units are not subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. Each combustion turbine has its own stack.}

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

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

**C.1. Permitted Capacity.** The maximum operation heat input rates, at an inlet temperature of 20 degrees F when firing natural gas and at an inlet temperature of 25 degrees F when firing No. 2 fuel oil, are as follows:

<b><u>Unit No.</u></b>	<b><u>MMBtu/hr Heat Input</u></b>	<b><u>Fuel Type</u></b>
3	209	Natural Gas
	209	No. 2 Fuel Oil
2	209	Natural Gas
	209	No. 2 Fuel Oil
1	209	Natural Gas
	209	No. 2 Fuel Oil

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

**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 turbines.

[Rules 62-4.160(2) and 62-213.440(1), 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 53-238714]

### **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.}

**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 53-238714]

**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 53-238714]

### **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, both ASTM D4057-88 and ASTM D129-91, or the latest edition.

[Rules 62-213.440 and 62-297.440, F.A.C.]

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

a. Testing of emissions shall be conducted with each 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.

b. 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 a letter dated February 7, 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., 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 53-238714]

**C.16. Visible Emissions Testing - Annual.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units 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.****E.U. ID****No.****Brief Description**

-008

Combined Cycle Combustion Turbine

The emission unit is a 120 megawatt combined cycle combustion gas turbine with a heat recovery steam generator (HRSG) designated as Larsen Unit #8. The combustion turbine fires natural gas as the primary fuel, and No. 2 distillate oil with a maximum sulfur content of 0.20 percent by weight as a limited auxiliary fuel. The combustion turbine is a GE Model PG7111 (EA) Frame 7 unit equipped with water injection to reduce nitrogen oxides emissions and an inlet fogger system. The HRSG powers an existing steam turbine. The emissions unit can exhaust through the HRSG or through a by-pass stack. Turbine #8 began commercial service in July, 1992.

{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.; Prevention of Significant Deterioration (PSD) in Rule 62-212.400, F.A.C.; and Best Available Control Technology (BACT), dated July 26, 1991, in Rule 62-212.410, 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 process/operation rate, at an inlet temperature of 25 degrees F, is 1055 MMBtu per hour (lower heating value) heat input firing natural gas or 1040 MMBtu per hour (lower heating value) heat input firing No. 2 distillate oil. The inlet fogger system may be operated any time Unit #8 is in operation.

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

**D.2. Methods of Operation. Fuels.**

a. This emissions unit fires natural gas as the primary fuel and No. 2 distillate oil as the secondary fuel.

b. The consumption of No. 2 distillate oil shall not exceed 8,190 gallons per hour and 23,914,800 gallons per year.

c. The maximum annual firing of No. 2 distillate oil shall not exceed 1/3 of the annual capacity factor.

d. The maximum sulfur content of the No. 2 distillate oil shall not exceed 0.20 percent by weight.

[Rules 62-210.200(PTE), 62-212.400, and 62-212.410, F.A.C.; and, PSD-FL-166]



**D.3. Hours of Operation.** This emissions unit may operate continuously, i.e., 8,760 hours/year.  
[Rule 62-210.200(PTE), F.A.C.]

### **Emission Limitations and Standards**

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

**D.4. Nitrogen Oxides.** The NO<sub>x</sub> emissions shall not exceed 25 ppmv at 15 percent oxygen on a dry basis and 425 tons per year when firing natural gas.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.5. Nitrogen Oxides.** The NO<sub>x</sub> emissions shall not exceed 42 ppmv at 15 percent oxygen on a dry basis and 244 tons per year when firing No. 2 distillate oil.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

{Permitting note: Since the BACT limit established for nitrogen oxides is more stringent than the NSPS limit, compliance with the nitrogen oxides BACT limits of specific conditions **D4.** and **D.5.** is assumed to show compliance with the nitrogen oxides limit of 40 CFR 60.332.}

**D.6. Sulfur Dioxide.** The SO<sub>2</sub> emissions shall not exceed 8.6 tons per year when firing natural gas.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.7. Sulfur Dioxide.** The SO<sub>2</sub> emissions shall not exceed 307 tons per year when firing No. 2 distillate oil. The maximum sulfur content of the No. 2 distillate oil shall not exceed 0.20 percent by weight.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.8. PM/PM<sub>10</sub>.** The PM/PM<sub>10</sub> emissions shall not exceed 0.006 pound per MMBtu heat input and 22 tons per year when firing natural gas.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.9. PM/PM<sub>10</sub>.** The PM/PM<sub>10</sub> emissions shall not exceed 0.025 pound per MMBtu heat input and 22 tons per year when firing No. 2 distillate oil.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.10. Sulfuric Acid Mist.** The sulfuric acid mist emissions shall not exceed 0.8 ton per year when firing natural gas.  
[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

**D.11. Sulfuric Acid Mist.** The sulfuric acid mist emissions shall not exceed 9.13 ton per year when firing No. 2 distillate oil. The maximum sulfur content of the No. 2 distillate oil shall not exceed 0.20 percent by weight.

[Rule 62-212.400(6), F.A.C.; and, PSD-FL-166]

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

[Requested in initial Title V permit application dated June 14, 1996; and, AC 53-190437 and PSD-FL-166]

**D.13. Volatile Organic Compounds.** Volatile Organic Compounds emissions shall not exceed 9 tons per year when firing natural gas or 22 tons per year when firing oil.

[AC 53-190437 and PSD-FL-166]

**D.14. Carbon Monoxide.** Carbon Monoxide emissions shall not exceed 25 ppmv at 15 percent oxygen on a dry basis and 232 tons per year when firing natural gas or 79 tons per year when firing oil.

[AC 53-190437 and PSD-FL-166]

**D.15. Mercury.** Mercury emissions shall not exceed  $3.0 \times 10^{-6}$  pounds per million Btu heat input and 0.003 ton per year when firing oil.

[AC 53-190437 and PSD-FL-166]

**D.16. Lead.** Lead emissions shall not exceed  $2.8 \times 10^{-5}$  pounds per million Btu heat input and 0.03 ton per year when firing oil.

[AC 53-190437 and PSD-FL-166]

**D.17. Beryllium.** Beryllium emissions shall not exceed  $2.5 \times 10^{-6}$  pounds per million Btu heat input and 0.003 ton per year when firing oil.

[AC 53-190437 and PSD-FL-166]

#### **Excess Emissions**

**D.18.** Excess emissions from this emissions unit resulting from startup, shutdown or malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

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

**D.19.** 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.20.** 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)]

**D.21.** 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)]

**D.22.** 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)]

{Permitting note: No. 2 distillate oil is only supplied with intermediate bulk storage; and, a custom fuel schedule has been established for natural gas.}

**D.23.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

**D.24.** The permittee shall monitor sulfur content and nitrogen content of natural gas fired in the turbine as follows:

Custom Fuel Monitoring Schedule for Natural Gas

1. Monitoring of fuel nitrogen content shall not be required when firing natural gas.
2. Sulfur Monitoring:
  - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the EPA approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are ASTM D1072-90(94)E-1; ASTM D3031-81(86); ASTM D3246-92; and ASTM D4084-94 as referenced in 40 CFR 60.335(b)(2).
  - b. Sulfur monitoring shall be conducted once per quarter for six quarters, beginning on July 1, 1996.
  - c. If the sulfur monitoring required for natural gas by 2(b) above shows little variability and the calculated sulfur dioxide emissions represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per year. This monitoring shall be conducted during the first and third quarters of each calendar year.
  - d. Should any sulfur analysis as required by items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333 the City will notify the Department of Environmental Protection of such excess emission and the customized fuel monitoring schedule shall be re-examined.
3. The City will notify the Department of Environmental Protection of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content varying greater than 10 grains/1000 cf gas) shall be considered as a change in natural gas supply. Sulfur content of the natural gas will be monitored weekly during the interim period when this monitoring schedule is being reexamined.
4. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five (5) years, and shall be available for inspection by appropriate regulatory personnel.
5. The City will obtain the sulfur content of the natural gas from Florida Gas Transmission Company.  
[40 CFR 60.334(b)(2); Rule 62-213.400, F.A.C.; and, AC 53-190437 and PSD-FL-166]

### **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.25.** 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)]

**D.26.** 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)]

**D.27.** 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)]

**D.28.** Initial compliance with the nitrogen oxides limit pursuant to 40 CFR 60.8 was conducted August 3-7, 1992. For annual compliance purposes, compliance with the nitrogen oxides limits of specific conditions **D.4.** and **D.5.** will be determined using EPA Method 20 and testing at capacity as defined by specific condition **D.36.** Correction to ISO conditions is not required for these annual compliance tests.  
[Rule 62-297.310, F.A.C.]

**D.29.** The owner or operator shall determine compliance with the sulfur content standard of 0.20 percent, by weight, as follows: ASTM D 2880-96 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92 shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.  
[40 CFR 60.335(d)]

**D.30.** To meet the requirements of 40 CFR 60.334(b), the owner or operator shall use the methods specified in 40 CFR 60.335 (a) and 40 CFR 60.335(d) of 40 CFR 60.335 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.

[40 CFR 60.335(e)]

**D.31. PM/PM<sub>10</sub>.** The test methods for PM/PM<sub>10</sub> emissions when firing oil shall be EPA Methods 5, 5B or 17, incorporated by reference in Chapter 62-297, F.A.C. The opacity emissions test may be used unless 10% opacity is exceeded.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-166]

**D.32. Sulfuric Acid Mist.** Compliance with the sulfuric acid mist standard shall be demonstrated by using natural gas or 0.2 percent sulfur, by weight, No. 2 distillate oil.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-166]

**D.33. Visible Emissions.** The test method for visible emissions shall be EPA Method 9, incorporated by reference in Chapter 62-297, F.A.C.

[Rules 62-213.440, 62-297.310, and 62-297.401, F.A.C.; and, PSD-FL-166]

**D.34. Volatile Organic Compounds, Carbon Monoxide, Mercury, Lead and Beryllium.** The initial compliance test requirement for these pollutants has been satisfied and no further tests are required.

[AC 53-190437 and PSD-FL-166]

**D.35. Frequency of Compliance Tests.** General Compliance Testing. 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.

[Rule 62-297.310(7)(a)8., F.A.C.]

**D.36. Operating Rate During Testing. **Not federally enforceable.**** Testing of emissions shall be conducted with the source operating at capacity. Capacity 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. When testing shows that NO<sub>x</sub> emissions exceed the standard when operating at capacity, the permittee shall recalibrate the NO<sub>x</sub> emission control system using emission testing at four loads as required in Subpart GG.

[Requested in a letter dated February 7, 1997.]

**D.37.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

**Record Keeping and Reporting Requirements**

**D.38.** 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)]

**D.39.** The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
  - (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
  - (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- [40 CFR 60.7(c)(1), (2), (3), & (4)]

**D.40.** 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)]

**D.41.** This emissions unit is also subject to the conditions contained in **Subsection E. Common Conditions.**

#### **Miscellaneous Requirements.**

**D.42.** Unless the Department has determined that other ambient concentrations are required to protect the public health and safety, predicted ambient air concentrations (AAC) shall not exceed the following levels for the pollutants shown:

Pollutant	Florida Air Reference Concentrations (ug/cubic meter)		
	8 hr. avg.	24 hr. avg.	Annual avg.
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Inorganic mercury compounds, all forms of vapor, as Hg	---	---	0.3

[AC 53-190437 and PSD-FL-166]

**D.43. 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.]



**D.44. 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]

**Subsection E. Common Conditions.****E.U. ID**

<b><u>No.</u></b>	<b><u>Brief Description</u></b>
-003	Fossil Fuel Fired Steam Generator #6
-004	Fossil Fuel Fired Steam Generator #7
-008	Combined Cycle Combustion Turbine

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

**Monitoring of Operations****E.1. 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**

**E.2. 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.3. 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.4. Applicable Test Procedures.**

**(a) Required Sampling Time.**

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

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

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

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

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

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

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

**E.5.** 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.]

TABLE 297.310-1  
CALIBRATION SCHEDULE

ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/-0.001" mean of at least three readings Max. deviation between readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually 2. One Point: Semiannually 3. Check after each test series	Spirometer or calibrated wet test or dry gas test meter	2%
		Comparison check	5%

**E.6. 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]

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

**E.7. 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.]

### **E.8. Test Reports.**

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

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

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

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.

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

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

**Operated by: City of Lakeland**  
**ORIS code: 0675**

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

The emissions units listed below are regulated under Acid Rain Part, Phase II.

**E.U.**

<b><u>ID No.</u></b>	<b><u>Description</u></b>
-004	Fossil Fuel Fired Steam Generator #7
-008	Combined Cycle Combustion Turbine #8

**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 07/01/95.  
[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><u>E.U. ID No.</u></b>	<b><u>EPA ID</u></b>	<b><u>Year</u></b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>-004</b>	<b>ID No. 7</b>	<b>SO2 allowances, under Table 2 or 3 of 40 CFR Part 73</b>	303*	303*	303*
<b>-008</b>	<b>ID No. 8</b>	<b>SO2 allowances, under Table 2 or 3 of 40 CFR Part 73</b>	659*	659*	659*

\* 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.]

\*\* If applicable, by January 1, 1999, this Part will be reopened to add NOx requirements in accordance with the regulations implementing section 407 of the Clean Air Act.

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

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



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

3. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c)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.]

## Appendix H-1, Permit History/ID Number Changes

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

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### Permit History (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Extended Date <sup>1,2</sup>	Revised Date(s)
-001	Oil-Fired Steam Generator #4	AO53-175869	4/30/90	5/17/95*	10/16/96	
-002	Oil-Fired Steam Generator #5	AO53-175868	4/27/90	5/17/95**	10/16/96	
-003	Oil-Fired Steam Generator #6	AO53-175871	4/30/90	5/17/95	8/14/96	
-004	Oil-Fired Steam Generator #7	AO53-175870	4/30/90	5/17/95	8/14/96	
-005	Peaking Gas Turbine #3	AO53-238714	12/15/93	9/1/98		
-006	Peaking Gas Turbine #2	AO53-238714	12/15/93	9/1/98		
-007	Peaking Gas Turbine #1	AO53-238714	12/15/93	9/1/98		
-008	Combined Cycle Combustion Turbine	AO53-219296	9/28/93	8/1/98		2/1/96
		AC53-190437/ PSD-FL-166	7/26/91	3/30/93		12/18/95
All	Charles Larsen Power Plant	1050003-004-AV	1/1/98	12/31/02		

\* Permanent Shutdown December 31, 1994; permit surrendered October 16, 1996.

\*\* Permanent Shutdown September 30, 1991; permit surrendered October 16, 1996.

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### (if applicable) ID Number Changes (for tracking purposes):

From: Facility ID No.: 40TPA530003

To: Facility ID No.: 1050003

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#### Notes:

1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

{Rule 62-213.420(1)(b)2., F.A.C., allows Title V Sources to operate under existing valid permits that were in effect at the time of application until the Title V permit becomes effective}

## **Appendix U-1, List of Unregulated Emissions Units and/or Activities.**

Lakeland Electric  
Charles Larsen Memorial Power Plant

**FINAL Permit Revision No.:** 1050003-009-AV  
**Facility ID No.:** 1050003

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**

<b><u>No.</u></b>	<b><u>Brief Description of Emissions Units and/or Activity</u></b>
-009	Emergency generators
-010	General purpose engines
-011	Surface coatings with VOC content >5% by volume
-012	Sand Blasting
-013	Parts Washing

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## **Appendix I-1, List of Insignificant Emissions Units and/or Activities.**

Lakeland Electric

**FINAL Permit Revision No.:** 1050003-009-AV

Charles Larsen Memorial Power Plant

**Facility ID No.:** 1050003

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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, are exempt from the permitting requirements of Chapters 62-210 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 Rule 62-210.300(3)(a), 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 Rule 62-210.300(3)(a), 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. Tank T-01 Distillate Fuel Oil No. 2
2. Tank T-02 Distillate Fuel Oil No. 2
3. Tank T-03 Residual Oil No. 6
4. Tank T-04 Residual Oil No. 6
5. Comfort heating with a maximum heat output of less than 1 MMBtu per hour
6. Internal combustion engines used for the transportation of passengers or freight
7. Non-industrial vacuum cleaning equipment
8. Refrigeration units
9. Vacuum pumps for labs
10. Steam cleaning equipment
11. Sanders of less than 5 square feet used exclusively on wood, plastic or their products
12. Space heating equipment other than boilers
13. Bakery ovens
14. Lab equipment
15. Brazing, soldering or welding equipment
16. Laundry dryers
17. Fire and safety equipment
18. Surface coatings with VOC content <5% by volume

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Lakeland Electric  
Charles Larsen Memorial Power Plant

E.U. ID No.	Brief Description
-003	Fossil Fuel Fired Steam Generator #6

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	Oil	8,760	0.1 lb/MMBtu			30.59	134.0	62-296.405 (1 )(b) FAC	III. A.3.
PM	Gas	8,760	0.1 lb/MMBtu			28.65	125.5	62-296.405 (1 )(b) FAC	III. A.3.
PM	Oil	N/A	0.3 lb/MMBtu - 3hrs in any 24 hr period			91.77	402.0	62-210.700 (3 ) FAC	III. A.4.
PM	Gas	N/A	0.3 lb/MMBtu - 3 hrs in any 24 hr period			85.95	376.5	62-210.700 (3 ) FAC	III. A.4.
SO <sub>2</sub>	Oil	8,760	2.75 lb/MMBtu			841.2	3684	62-296.405(1)(c)1.j.FAC	III. A.5.
VE	Oil	8,760	20% opacity except 40% for 2 min /hr				N/A	62-296.405(1)(a) FAC	III. A.6.
VE	Gas	8,760	20% opacity except 40% for 2 min /hr				N/A	62-296.405(1)(a) FAC	III. A.6.
VE	Oil	N/A	60% opacity 3 hrs in any 24 hr period soot blowing or load change				N/A	62-210.700(3) FAC	III. A.7.
VE	Gas	N/A	60% opacity 3 hrs in any 24 hr period soot blowing or load change				N/A	62-210.700(3) FAC	III. A.7.

Notes: \* The "Equivalent Emissions" listed are for informational purposes only.  
N/A : Not Applicable

Page 1 of 4

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

Lakeland Electric  
Charles Larsen Memorial Power Plant

**FINAL Permit Revision No.:** 1050003-009-AV  
**Facility ID No.:** 1050003

**E.U. ID No.**      **Brief Description**  
-004              Fossil Fuel Fired Steam Generator #7

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

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	Oil	8,760	0.1 lb/MMBtu			59.76	261.7	62-296.405 (1 )(b) FAC	III. B.3.
PM	Gas	8,760	0.1 lb/MMBtu			61.56	269.6	62-296.405 (1 )(b) FAC	III. B.3.
PM	Oil	N/A	0.3 lb/MMBtu - 3hrs in any 24 hr period			179.3	785.2	62-210.700 (3 ) FAC	III. B.4.
PM	Gas	N/A	0.3 lb/MMBtu - 3 hrs in any 24 hr period			184.7	808.9	62-210.700 (3 ) FAC	III. B.4.
SO <sub>2</sub>	Oil	8,760	2.75 lb/MMBtu			1643	7198	62-296.405(1)(c)1.j.FAC	III. B.5.
VE	Oil	8,760	20% opacity except 40% for 2 min /hr				N/A	62-296.405(1)(a) FAC	III. B.6.
VE	Gas	8,760	20% opacity except 40% for 2 min /hr				N/A	62-296.405(1)(a) FAC	III. B.6.
VE	Oil	N/A	60% opacity 3 hrs in any 24 hr period soot blowing or load change				N/A	62-210.700(3) FAC	III. B.7.
VE	Gas	N/A	60% opacity 3 hrs in any 24 hr period soot blowing or load change				N/A	62-210.700(3) FAC	III. B.7.
<b>Notes:</b> * The "Equivalent Emissions" listed are for informational purposes only. N/A : Not Applicable									

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

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

E.U. ID No.	Brief Description
-005	Peaking Gas Turbine #3
-006	Peaking Gas Turbine #2
-007	Peaking Gas Turbine #1

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

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		
SO <sub>2</sub>	Oil	8,760	0.5% Sulfur by weight				465.2	EBA / AO 53-238714	III.C.3.
VE	Oil	8,760	20% opacity				N/A	62-296.320(4)(b)1 FAC	III.C.4.
VE	Gas	8,760	20% opacity				N/A	62-296.320(4)(b)1 FAC	III.C.4.
Notes: * The "Equivalent Emissions" listed are for informational purposes only. EBA: Established By Applicant N/A : Not Applicable									

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**Table 1-1. Summary of Air Pollutant Standards and Terms**

Lakeland Electric  
Charles Larsen Memorial Power Plant

**FINAL Permit Revision No.:** 1050003-009-AV  
**Facility ID No.:** 1050003

**E.U. ID No.**      **Brief Description**  
-008              Combined Cycle Combustion Turbine

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Pollutant Name	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions <sup>*</sup>		Regulatory Citation(s)	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
NO <sub>x</sub>	Gas	8,760	25 ppm @ 15% O <sub>2</sub> dry basis		425.0			62-212.400(6) FAC; PSD-FL-166	III.D.4.
NO <sub>x</sub>	Oil <sup>**</sup>		42 ppm @ 15% O <sub>2</sub> dry basis		244			62-212.400(6) FAC; PSD-FL-166	III.D.5.
SO <sub>2</sub>	Gas	8,760	Natural gas as primary fuel		9			62-212.400(6) FAC; PSD-FL-166	III.D.6.
SO <sub>2</sub>	Oil <sup>**</sup>		0.20% Sulfur by weight		307			62-212.400(6) FAC; PSD-FL-166	III.D.7.
PM/PM <sub>10</sub>	Gas	8,760	0.006 lb/MMBtu		22			62-212.400(6) FAC; PSD-FL-166	III.D.8.
PM/PM <sub>10</sub>	Oil <sup>**</sup>		0.025 lb/MMBtu		22			62-212.400(6) FAC; PSD-FL-166	III.D.9.
SAM	Gas	8,760	Natural gas as primary fuel		0.8			62-212.400(6) FAC; PSD-FL-166	III.D.10.
SAM	Oil <sup>**</sup>		0.20% Sulfur by weight		9.13			62-212.400(6) FAC; PSD-FL-166	III.D.11.
VE		8,760	Not Exceed 10% opacity					EBA/AC 53-190437	III.D.12.
<b>Notes:</b> <sup>*</sup> The "Equivalent Emissions" listed are for informational purposes only. <sup>**</sup> Maximum annual consumption of No. 2 fuel oil shall not exceed 1/3 of the annual capacity factor EBA: Established By Applicant    SAM: Sulfuric Acid Mist									

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**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

**E.U. ID No.      Brief Description**  
-003              Fossil Fuel Fired Steam Generator #6

This table summarizes information for convenience purposes only.  
This table does not supersede any of the terms or conditions of this permit.

Pollutant Name or parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS **	Permit Condition(s)
PM	Oil	17, 5, 5B, or 5F	Annual	1-Nov	1 hour		III.A.12
PM	Gas	17, 5, 5B, or 5F	Annual	1-Nov	1 hour		III.A.12
SO <sub>2</sub>	Oil	6, 6A, 6B, 6C, or fuel sampling and analysis	Annual	1-Nov	1 hour		III.A.13
VE	All	DEP Method 9	Annual	1-Nov	60 minutes		III.A.15

**Notes:**

Frequency base date established for planning purposes only; see Rule 62-297.310. F.A.C.

\*\*CMS [=] compliance demonstrated by CEMS

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**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

E.U. ID No.	Brief Description
-004	Fossil Fuel Fired Steam Generator #7

This table summarizes information for convenience purposes only.  
This table does not supersede any of the terms or conditions of this permit.

Pollutant Name or parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS **	Permit Condition(s)
PM	Oil	17, 5, 5B, or 5F	Annual	6-Dec	1 Hour		III.B.12
PM	Gas	17, 5, 5B, or 5F	Annual	6-Dec	1 Hour		III.B.12
SO <sub>2</sub>	Oil	6, 6A, 6B, 6C, or Fuel Sampling and Analysis DEP Method 9	Annual	6-Dec	1 Hour		III.B.13
VE	All		Annual	6-Dec	60 Minutes		III.B.15

**Notes:**

Frequency base date established for planning purposes only; see Rule 62-297.310. F.A.C.

\*\*CMS [=] compliance demonstrated by CEMS

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**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

E.U. ID No.	Brief Description
-005	Peaking Gas Turbine #3
-006	Peaking Gas Turbine #2
-007	Peaking Gas Turbine #1

This table summarizes information for convenience purposes only.  
This table does not supersede any of the terms or conditions of this permit.

Pollutant Name or parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS **	Permit Condition(s)
Sulfur	Oil	Fuel Sampling and Analysis					III.C.7.
VE	All	9	Annual	5-Mar	30 Minutes		III.C.8.
<b>Notes:</b> Frequency base date established for planning purposes only; see Rule 62-297.310. F.A.C. **CMS [=] compliance demonstrated by CEMS							

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**Table 2-1, Summary of Compliance Requirements**

Lakeland Electric  
Charles Larsen Memorial Power Plant

FINAL Permit Revision No.: 1050003-009-AV  
Facility ID No.: 1050003

E.U. ID No.	Brief Description
-008	Combined Cycle Combustion Turbine

This table summarizes information for convenience purposes only.  
This table does not supersede any of the terms or conditions of this permit.

Pollutant Name or parameter	Fuel(s)	Compliance Method	Testing Time Frequency	Frequency Base Date *	Min. Compliance Test Duration	CMS **	Permit Condition(s)
NO <sub>x</sub>	all	20	Annual	31-Dec	1 Hour	yes	III.D.21.
PM/PM <sub>10</sub>	oil	5 or 17	Renewal	31-Dec	1 Hour		III.D.24.
SAM	all	Low Sulfur Fuel	Annual	31-Dec	30 Minutes		III.D.25.
VE	all	9					III.D.26.
Water to Fuel	all						III.D.16.

**Notes:**

Frequency base date established for planning purposes only; see Rule 62-297.310. F.A.C.

\*\*CMS | = | compliance demonstrated by CEMS

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# Phase II Permit Application

Page 1

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: ☐ New ☒ Revised**STEP 1**

Identify the source by plant name, State, and ORIS code from NADB

Larsen Memorial Power Plant, FL, 675

## Compliance Plan

**STEP 2**

Enter the boiler ID# from NADB for each affected unit, and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e

a	b	c	d	e
Boiler ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units Commence Operation Date	New Units Monitor Certification Deadline
7	Yes	No		
8	Yes	No	11/92	1/1/96
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

**STEP 3**

Check the box if the response in column c of Step 2 is "Yes" for any unit



For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

**STEP 4**  
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

Plant Name (from Step 1)  
*Larsen Memorial Power Plant*

#### Standard Requirements

##### Permit Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and
  - (ii) Have an Acid Rain Part.

##### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

##### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 75.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

##### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

##### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1)  
*Larsen Memorial Power Plant*

Recordkeeping and Reporting Requirements (cont.)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.

(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.

(5) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name *Charles D. Garing, Plant Manager*

Signature

*Charles D. Garing*

Date

*12/15/92*

**STEP 5 (optional)**  
Enter the source AIRS  
and FINDS identification  
numbers, if known

AIRS
FINDS



STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:

Florida Electric Power Coordinating Group, Inc., )  
Petitioner. )

ASP No. 97-B-01

ORDER ON REQUEST  
FOR  
ALTERNATE PROCEDURES AND REQUIREMENTS

Pursuant to Rule 62-297.620, Florida Administrative Code (F.A.C.), the Florida Electric Coordinating Group, Incorporated, (FCG) petitioned for approval to: (1) Exempt fossil fuel steam generators which burn liquid and/or solid fuel for less than 400 hours during the federal fiscal year from the requirement to conduct an annual particulate matter compliance test; and, (2) Exempt fossil fuel steam generators which burn liquid and/or solid fuel for less than 400 hours during the federal fiscal year from the requirement to conduct an annual particulate matter compliance test during the year prior to renewal of an operation permit. This Order is intended to clarify particulate testing requirements for those fossil fuel steam generators which primarily burn gaseous fuels including, but not necessarily limited to natural gas.

Having considered the provisions of Rule 62-296.405(1), F.A.C., Rule 62-297.310(7), F.A.C., and all supporting documentation, the following Findings of Fact, Conclusions of Law, and Order are entered:

FINDINGS OF FACT

1. The Florida Electric Power Coordinating Group, Incorporated, petitioned the Department to exempt those fossil fuel steam generators which have a heat input of more than 250 million Btu per hour and burn solid and/or liquid fuel less than 400 hours during the year from the requirement to conduct an annual particulate matter compliance test. [Exhibit 1]
2. Rule 62-296.405(1)(a), F.A.C., applies to those fossil fuel steam generators that are not subject to the federal standards of performance for new stationary sources (NSPS) in 40 CFR 60 and which have a heat input of more than 250 million Btu per hour.
3. Rule 62-296.405(1)(a), F.A.C., limits visible emissions from affected fossil fuel steam generators to, "20 percent opacity except for either one six-minute period per hour during which

not exceed 40 percent. The option selected shall be specified in the emissions unit's construction and operation permits. Emissions units governed by this visible emission limit shall test for particulate emission compliance annually and as otherwise required by Rule 62-297, F.A.C."

4. Rule 62-296.405(1)(a), F.A.C., further states, "Emissions units electing to test for particulate matter emission compliance quarterly shall be allowed visible emissions of 40 percent opacity. The results of such tests shall be submitted to the Department. Upon demonstration that the particulate standard has been regularly complied with, the Secretary, upon petition by the applicant, shall reduce the frequency of particulate testing to no less than once annually."

5. Rule 297.310(7)(a)1., F.A.C., states, "The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit."

6. Rule 297.310(7)(a)2., F.A.C., states, "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."

7. Rule 297.310(7)(a)3., F.A.C., further states, "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."

8. Rule 297.310(7)(c)4., F.A.C., states, "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..."

9. Rule 297.310(7)(a)5., F.A.C., states, "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."

10. Rule 297.310(7)(a)6., F.A.C., states, "For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be

required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup."

11. Rule 297.310(7)(a)7., F.A.C., states, "For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to Rule 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup." [Note: The reference should be to Rule 62-296.405(1)(a), F.A.C., rather than Rule 62-296.405(2)(a), F.A.C.]

12. The fifth edition of the U. S. Environmental Protection Agency's Compilation of Air Pollutant Emission Factors, AP-42, that emissions of filterable particulate from gas-fired fossil fuel steam generators with a heat input of more than about 10 million Btu per hour may be expected to range from 0.001 to 0.006 pound per million Btu. [Exhibit 2]

13. Rule 62-296.405(1)(b), F.A.C. and the federal standards of performance for new stationary sources in 40 CFR 60.42, Subpart D, limit particulate emissions from uncontrolled fossil fuel fired steam generators with a heat input of more than 250 million Btu to 0.1 pound per million Btu.

### CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider the matter pursuant to Section 403.061, Florida Statutes (F.S.), and Rule 62-297.620, F.A.C.

2. Pursuant to Rule 62-297.310(7), F.A.C., the Department may require Petitioner to conduct compliance tests that identify the nature and quantity of pollutant emissions, if, after investigation, it is believed that any applicable emission standard or condition of the applicable permits is being violated.

3. There is reason to believe that a fossil fuel steam generator which does not burn liquid and/or solid fuel (other than during startup) for a total of more than 400 hours in a federal fiscal year and complies with all other applicable limits and permit conditions is in compliance with the applicable particulate mass emission limiting standard.

### ORDER

Having considered the requirements of Rule 62-296.405, F.A.C., Rule 62-297.310, F.A.C., and supporting documentation, it is hereby ordered that:

1. 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;

2. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup;

3. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to Rule 62-296.405(1)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup;

4. 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 particulate matter emission compliance test results for any fossil fuel steam generator emissions unit that burned liquid and/or solid fuel for a total of no more than 400 hours during the year prior to renewal.

5. Pursuant to Rule 62-297.310(7), F.A.C., owners of affected fossil fuel steam generators may be required to conduct compliance tests that identify the nature and quantity of pollutant emissions, if, after investigation, it is believed that any applicable emission standard or condition of the applicable permits is being violated.

6. Pursuant to Rule 62-297.310(8), F.A.C., owners of affected fossil fuel steam generators shall submit the compliance test report to the District Director of the Department district office having jurisdiction over the emissions unit and, where applicable, the Air Program Administrator of the appropriate Department-approved local air program within 45 days of completion of the test.

#### PETITION FOR ADMINISTRATIVE REVIEW

The Department will take the action described in this Order unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 of the Florida Statutes, or a party requests mediation as an alternative remedy under section 120.573 before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing are set forth below, followed by the procedures for requesting mediation.

A person whose substantial interests are affected by the Department's proposed decision may petition for an administrative hearing in accordance with sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions must be filed within 21 days of receipt of this Order. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition (or a request for mediation, as discussed below) within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of

the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number, and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by each petitioner, if any;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement identifying the rules or statutes each petitioner contends require reversal or modification of the Department's action or proposed action; and,
- (g) A statement of the relief sought by each petitioner, stating precisely the action each petitioner wants the Department to take with respect to the Department's action or proposed action in the notice of intent.

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

A person whose substantial interests are affected by the Department's proposed decision, may elect to pursue mediation by asking all parties to the proceeding to agree to such mediation and by filing with the Department a request for mediation and the written agreement of all such parties to mediate the dispute. The request and agreement must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

A request for mediation must contain the following information:

(a) The name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(b) A statement of the preliminary agency action;

(c) A statement of the relief sought; and

(d) Either an explanation of how the requester's substantial interests will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that the requester has already filed, and incorporating it by reference.

The agreement to mediate must include the following:

(a) The names, addresses, and telephone numbers of any persons who may attend the mediation;

(b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time;

(c) The agreed allocation of the costs and fees associated with the mediation;

(d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation;

(e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen;

(f) The name of each party's representative who shall have authority to settle or recommend settlement; and

(g) The signatures of all parties or their authorized representatives.

As provided in section 120.573 of the Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by sections 120.569 and 120.57 for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such a modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will

specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under section 120.542 of the Florida Statutes. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

The petition must specify the following information:

- (a) The name, address, and telephone number of the petitioner;
- (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any;
- (c) Each rule or portion of a rule from which a variance or waiver is requested;
- (d) The citation to the statute underlying (implemented by) the rule identified in (c) above;
- (e) The type of action requested;
- (f) The specific facts that would justify a variance or waiver for the petitioner;
- (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and
- (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver, when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in section 120.542(2) of the Florida Statutes, and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner. Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully

each of those terms is defined in section 120.542(2) of the Florida Statutes, and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner. Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

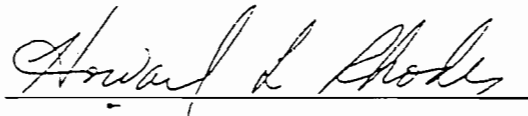
This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs. Upon timely filing of a petition, this Order will not be effective until further Order of the Department.

#### RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order 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 Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department.

DONE AND ORDERED this 17 day of March, 1997 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



HOWARD L. RHODES, Director  
Division of Air Resources Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
(904) 488-0114



## CERTIFICATE OF SERVICE

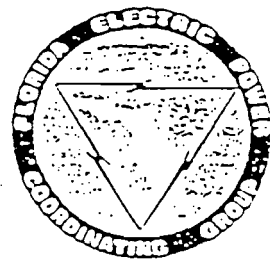
The undersigned duly designated deputy clerk hereby certifies that a copy of the foregoing was mailed to Rich Piper, Chair, Florida Power Coordinating Group, Inc., 405 Reo Street, Suite 100, Tampa, Florida 33609-1004, on this 18<sup>th</sup> day of March 1997.

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.

Martha M. Wise      3-18-97  
Clerk                      Date



January 28, 1997

Clair H. Fancy, P.E.  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 5505  
Tallahassee, FL 32301

RECEIVED

JAN 28 1997

BUREAU OF  
AIR REGULATION

RE: Comments Regarding Draft Title V Permits

Dear Mr. Fancy:

The Florida Electric Power Coordinating Group, Inc. (FCG), which is made up of 36 utilities owned by investors, municipalities, and cooperatives, has been following the implementation of Title V in Florida and recently submitted comments to you on draft Title V permit conditions by letter dated December 4, 1996. As indicated in that letter, representatives from the FCG would like to meet with you and other members of your air permitting staff to discuss some significant concerns that FCG member companies have regarding conditions that may be included in Title V permits issued by your office. While we will be discussing these issues with you and your staff in greater detail at that meeting, we would like to explain some of our concerns in this letter.

Primarily, the FCG members are concerned that the Title V permits may contain conditions that are much different in important respects than those conditions currently included in existing air permits. During the rulemaking workshops and seminars conducted by the Department to discuss the rules implementing the Title V permitting program, representations were made on several occasions that industry could expect to see permit conditions that were substantively similar to existing permit conditions and that primarily the format was changing. Representations were also made to industry that Title V did not impose additional substantive requirements beyond what was already required under the Department's rules. Based on the first draft Title V permit that we have reviewed, we are concerned that there may be some attempt to change the substantive requirements on existing facilities through the Title V permitting process, and we would like to discuss this with you at the meeting we have scheduled for January 30, 1997.

1. Federal Enforceability--The FCG has long been concerned about the designation of non-federally enforceable permit terms and conditions. We are concerned about this issue because the Department's first draft Title V permits have included language stating that *all* terms and conditions would become federally enforceable once the permit is issued. This approach is consistent with the Department's guidance memorandum dated September 13, 1996 (DARM-PER/V-18), but we understand that the Department may now intend to remove all references to

Clair H. Fancy, P.E.  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
January 28, 1997  
Page 2

the federal enforceability of permit terms and conditions. We are also concerned about this approach because a Title V permit is generally federally enforceable and, without any designation of non-federally enforceable terms and conditions, the entire permit could be interpreted to be federally enforceable. As we stated in the December 4 letter as well as our letter dated October 11, 1996, all terms and conditions in a Title V permit do *not* become enforceable by the U.S. Environmental Protection Agency and citizens under the Clean Air Act simply by inclusion in a Title V permit. To make it clear which provisions in a Title V permit are not federally enforceable (which are being included because of state or local requirements only), it is very important to specifically designate those conditions as having no federally enforceable basis. Such a designation is actually required under the federal Title V rules, which provide that permitting agencies are to "specifically designate as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements." 40 CFR § 70.6(b). We would like to discuss with you our concerns about this issue and to again specifically request that when Title V permits are issued by the Department, conditions having no federally enforceable basis clearly be identified as such.

2. PM Testing on Gas--The FCG understands that the Department may attempt to require annual particulate matter compliance testing while firing natural gas to determine compliance with the 0.1 lb/mmBtu emission limit established under Rule 62-296.405(1)(b), F.A.C. The FCG member companies feel strongly that compliance testing for particulate matter should not be required while firing natural gas. The Department has not historically required particulate matter compliance testing while firing natural gas, it is not required under the current permits for these units, and it should not be necessary since natural gas is such a clean fuel. Typically only *de minimis* amounts of particulate matter would be expected from the firing of natural gas, so compliance testing would not provide meaningful information to the Department, and the expense to conduct such tests is not justified. We understand that Department representatives suggested that industry could pursue an alternative test procedure under Rule 62-297.620, F.A.C., to allow a visible emissions test to be used in lieu of a stack test for determining compliance with the particulate matter limit. While certainly a visible emissions test would be preferable over a stack test, neither of these tests should be needed to demonstrate compliance with the particulate matter limit of 0.1 lb/mmBtu while burning natural gas. The FCG strongly urges that the Department reconsider its position on this issue and clarify that compliance testing for particulate matter while firing natural gas is not required.

3. Excess Emissions--By letter dated December 5, 1996, the U.S. Environmental Protection Agency (EPA) submitted a letter commenting on a draft Title V permit that had been issued by the Department and indicated some concern regarding excess emission provisions included in conditions that were quoted from Rule 62-210.700, F.A.C. Because the permit conditions cited simply quote the applicable provisions of the Department's rules regarding

Clair H. Fancy, P.E.  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
January 28, 1997  
Page 3

excess emissions and because these rules have been approved as part of Florida's State Implementation Plan, the permit conditions are appropriate to be included in the permit. We understand that the Department intends to include as applicable requirements in Title V permit conditions the provisions of Rule 62-210.700, F.A.C. If the Department receives any further adverse comments regarding the excess emissions rule under 62-210.700, F.A.C., we would appreciate your contacting us. Because this issue is so important to us, we would like to discuss it with you in greater detail at our meeting on January 30.

4. Compliance Testing for Combustion Turbines--While the Department's November 22, 1995, guidance regarding the compliance testing requirements for combustion turbines clearly states that the use of heat input curves based on ambient temperatures and humidities is to be included as a permit condition *only* if requested by a permittee, we understand that the Department may intend to include this requirement in Title V permits for all combustion turbines. As we are sure you recall, the FCG worked over a period of several months with the Department on the development of the guidance memorandum and it was clearly understood by FCG members that the heat input curves would not be mandated but would remain voluntary for any existing combustion turbine. It was also understood by FCG members that the requirement to conduct testing at 95 to 100 percent of capacity would be required only if the permit applicant requested the use of heat input curves. We understand that the Department may be interpreting the requirement to use heat input curves and to test at 95 to 100 percent of permitted capacity to be mandatory for all combustion turbines. We would like to clarify this with you during our meeting. Also, we would like to confirm that, regardless of whether a combustion turbine uses heat input curves or tests at 95 to 100 percent of permitted capacity, it is necessary to test at four load points and correct to ISO *only* to determine compliance with the nitrogen oxides (NOx) standard under New Source Performance Standard Subpart GG under 40 CFR § 60.532 and not annually thereafter.

5. Test Methods--The FCG is concerned about the possibility of the Department requiring a full permit revision to authorize the use of an approved test method not specifically identified in a Title V permit, even though the Department may have separately approved the use of the particular test method for a unit (i.e., through a compliance test protocol). It is the FCG's position that language should be included in all Title V permits indicating that other test methods approved by the Department may be used. Further, a full permit revision (including public notice) should *not* be necessary when a test method not previously identified in the permit is approved for use by a unit. The Department's subsequent approval of test methods should simply be included in the next permit renewal cycle. The FCG understands that the Department planned to confirm this approach with the U.S. Environmental Protection Agency Region IV, and we would like to discuss this issue with you at the January 30 meeting to learn of the agency's response.

Clair H. Fancy, P.E.  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
January 28, 1997  
Page 4

6. Quarterly Reports--The FCG understands that the Department may be interpreting the quarterly reporting requirements under Rule 62-296.405(1)(g), F.A.C., to apply regardless of whether continuous emissions monitors were required under the preceding Rule 62-296.405(1)(f), F.A.C. It is the FCG's position that quarterly reports are required under Rule 62-296.405(1)(g) only when continuous emissions monitors are required under the preceding paragraph (f). While this may not be entirely clear from the language of the rules, paragraphs (f) and (g) were originally included in a separate rule on "continuous emission monitoring requirements" where it was very clear that the requirements of paragraph (g) applied *only* if continuous emission monitoring was required under paragraph (f). Research indicates that Rule 17-2.710, F.A.C. (copy attached), where these provisions were originally located, was first transferred to Rule 17-297.500, F.A.C. (which later became Rule 62-297.500), later repealed in November of 1994, and ultimately replaced with what is now Rule 62-296.405(1)(f) and (g), F.A.C. To the extent that an emissions unit is not subject to Rule 62-296.405(1)(f) and is not required to install and operate continuous emissions monitors (e.g., oil- and gas-fired units), the quarterly reporting requirements of paragraph (g) should not apply.

7. Trivial Activities--As you may recall, in May of 1996, the FCG submitted to the Department a list of small, *de minimis* emissions units and activities that it considered to be "trivial," consistent with the list developed by EPA as part of the Title V "White Paper" and incorporated by reference by the Department in its March 15, 1996, guidance memorandum (DARM-PER/V-15-Revised). We never received a response from the Department and now understand that the Department may not have made a determination as to whether any of the emission units or activities on the list should qualify as "trivial." This is an important issue to the FCG because only "trivial" activities can be omitted from the Title V permit application and permit, and ultimately omitted from emission estimates in the annual air operation reports under Rule 62-210.370(3), F.A.C. The FCG remains hopeful that the Department will consider its request to determine that most, if not all, of the emission units and activities on the May, 1996, list to be "trivial." We would like to discuss a possible resolution of this issue with you and your staff at the January 30 meeting.

8. Permit Shield--The FCG continues to be concerned about the language in Conditions 5 and 20 of Appendix TV-1, Title V Conditions, which circumvents the permit shield provisions under Section 403.0872(15), Florida Statutes, and Rule 62-213.460, F.A.C. The FCG believes that these conditions should be deleted in their entirety. To the extent that the Department attempt to caveat the applicability of these conditions, the FCG believes that it is important to cite to not only the regulatory citation for the permit shield but the statutory citation as well.

Thank you again for considering the FCG's comments on the draft Title V permits. We very much appreciate the cooperation we have received from the Department throughout the

Clair H. Fancy, P.E.  
Chief, Bureau of Air Regulation  
Florida Department of Environmental Protection  
January 28, 1997  
Page 5

Title V implementation process, and we look forward to our meeting later this week. If you have any questions in the meantime, please call me at 561-625-7661.

Sincerely,

*Rich Piper*

Rich Piper, Chair *new*  
FCG Air Subcommittee

Enclosures

cc: Howard L. Rhodes, DEP  
John Brown, DEP  
Pat Comer, DEP OGC  
Scott M. Sheplak, DEP  
Edward Svec, DEP  
FCG Air Subcommittee  
Angela Morrison, HGSS

58601

AP-42  
FIFTH EDITION  
JANUARY 1995

# COMPILATION OF AIR POLLUTANT EMISSION FACTORS

## VOLUME I: STATIONARY POINT AND AREA SOURCES

Office Of Air Quality Planning And Standards  
Office Of Air And Radiation  
U. S. Environmental Protection Agency  
Research Triangle Park, NC 27711

January 1995

Exhibit 2

## 1.4 Natural Gas Combustion

### 1.4.1 General<sup>1-2</sup>

Natural gas is one of the major fuels used throughout the country. It is used mainly for industrial process steam and heat production; for residential and commercial space heating; and for electric power generation. Natural gas consists of a high percentage of methane (generally above 80 percent) and varying amounts of ethane, propane, butane, and inerts (typically nitrogen, carbon dioxide, and helium). Gas processing plants are required for the recovery of liquefiable constituents and removal of hydrogen sulfide before the gas is used (see Section 5.3, Natural Gas Processing). The average gross heating value of natural gas is approximately 8900 kilocalories per standard cubic meter (1000 British thermal units per standard cubic foot), usually varying from 8000 to 9500 kcal/sm (900 to 1100 Btu/scf).

### 1.4.2 Emissions And Controls<sup>3-5</sup>

Even though natural gas is considered to be a relatively clean-burning fuel, some emissions can result from combustion. For example, improper operating conditions, including poor air/fuel mixing, insufficient air, etc., may cause large amounts of smoke, carbon monoxide (CO), and organic compound emissions. Moreover, because a sulfur-containing mercaptan is added to natural gas to permit leak detection, small amounts of sulfur oxides will be produced in the combustion process.

Nitrogen oxides ( $\text{NO}_x$ ) are the major pollutants of concern when burning natural gas. Nitrogen oxide emissions depend primarily on the peak temperature within the combustion chamber as well as the furnace-zone oxygen concentration, nitrogen concentration, and time of exposure at peak temperatures. Emission levels vary considerably with the type and size of combustor and with operating conditions (particularly combustion air temperature, load, and excess air level in boilers).

Currently, the two most prevalent  $\text{NO}_x$  control techniques being applied to natural gas-fired boilers (which result in characteristic changes in emission rates) are low  $\text{NO}_x$  burners and flue gas recirculation. Low  $\text{NO}_x$  burners reduce  $\text{NO}_x$  by accomplishing the combustion process in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses  $\text{NO}_x$  formation. The three most common types of low  $\text{NO}_x$  burners being applied to natural gas-fired boilers are staged air burners, staged fuel burners, and radiant fiber burners. Nitrogen oxide emission reductions of 40 to 85 percent (relative to uncontrolled emission levels) have been observed with low  $\text{NO}_x$  burners. Other combustion staging techniques which have been applied to natural gas-fired boilers include low excess air, reduced air preheat, and staged combustion (e. g., burners-out-of-service and overfire air). The degree of staging is a key operating parameter influencing  $\text{NO}_x$  emission rates for these systems.

In a flue gas recirculation (FGR) system, a portion of the flue gas is recycled from the stack to the burner windbox. Upon entering the windbox, the gas is mixed with combustion air prior to being fed to the burner. The FGR system reduces  $\text{NO}_x$  emissions by two mechanisms. The recycled flue gas is made up of combustion products which act as inerts during combustion of the fuel/air mixture. This additional mass is heated in the combustion zone, thereby lowering the peak flame temperature and reducing the amount of  $\text{NO}_x$  formed. To a lesser extent, FGR also reduces  $\text{NO}_x$  formation by lowering the oxygen concentration in the primary flame zone. The amount of flue gas recirculated is a key operating parameter influencing  $\text{NO}_x$  emission rates for these systems. Flue gas



recirculation is normally used in combination with low  $\text{NO}_x$  burners. When used in combination, these techniques are capable of reducing uncontrolled  $\text{NO}_x$  emissions by 60 to 90 percent.

Two post-combustion technologies that may be applied to natural gas-fired boilers to reduce  $\text{NO}_x$  emissions by further amounts are selective noncatalytic reduction and selective catalytic reduction. These systems inject ammonia (or urea) into combustion flue gas to reduce inlet  $\text{NO}_x$  emission rates by 40 to 70 percent.

Although not measured, all particulate matter (PM) from natural gas combustion has been estimated to be less than 1 micrometer in size. Particulate matter is composed of filterable and condensable fractions, based on the EPA sampling method. Filterable and condensable emission rates are of the same order of magnitude for boilers; for residential furnaces, most of the PM is in the form of condensable material.

The rates of CO and trace organic emissions from boilers and furnaces depend on the efficiency of natural gas combustion. These emissions are minimized by combustion practices that promote high combustion temperatures, long residence times at those temperatures, and turbulent mixing of fuel and combustion air. In some cases, the addition of  $\text{NO}_x$  control systems such as FGR and low  $\text{NO}_x$  burners reduces combustion efficiency (due to lower combustion temperatures), resulting in higher CO and organic emissions relative to uncontrolled boilers.

Emission factors for natural gas combustion in boilers and furnaces are presented in Tables 1.4-1, 1.4-2, and 1.4-3.<sup>6</sup> For the purposes of developing emission factors, natural gas combustors have been organized into four general categories: utility/large industrial boilers, small industrial boilers, commercial boilers, and residential furnaces. Boilers and furnaces within these categories share the same general design and operating characteristics and hence have similar emission characteristics when combusting natural gas. The primary factor used to demarcate the individual combustor categories is heat input.

Table 1.4-1 (Metric And English Units). EMISSION FACTORS FOR PARTICULATE MATTER (PM)  
FROM NATURAL GAS COMBUSTION<sup>a</sup>

Combustor Type (Size, 10 <sup>6</sup> Btu/hr Heat Input) (SCC) <sup>b</sup>	Filterable PM <sup>c</sup>			Condensable PM <sup>d</sup>		
	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING
Utility/large industrial boilers (> 100) (1-01-006-01, 1-01-006-04)	16 - 80	1 - 5	B	ND	ND	NA
Small industrial boilers (10 - 100) (1-02-006-02)	99	6.2	B	120	7.5	D
Commercial boilers (0.3 - < 10) (1-03-006-03)	72	4.5	C	120	7.5	C
Residential furnaces (< 0.3) (No SCC)	2.8	0.18	C	180	11	D

<sup>a</sup> References 9-14. All factors represent uncontrolled emissions. Units are kg of pollutant/10<sup>6</sup> cubic meters natural gas fired and lb of pollutant/10<sup>6</sup> cubic feet natural gas fired. Based on an average natural gas higher heating value of 8270 kcal/m<sup>3</sup> (1000 Btu/scf). The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. ND = no data. NA = not applicable.

<sup>b</sup> SCC = Source Classification Code.

<sup>c</sup> Filterable PM is that particulate matter collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train.

<sup>d</sup> Condensable PM is that particulate matter collected using EPA Method 202, (or equivalent). Total PM is the sum of the filterable PM and condensable PM. All PM emissions can be assumed to be less than 10 micrometers in aerodynamic equivalent diameter (PM-10).

Table 1.4-2 (Metric And English Units). EMISSION FACTORS FOR SULFUR DIOXIDE (SO<sub>2</sub>), NITROGEN OXIDES (NO<sub>x</sub>), AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION<sup>a</sup>

Combustor Type (Size, 10 <sup>6</sup> Btu/hr Heat Input) (SCC) <sup>b</sup>	SO <sub>2</sub> <sup>c</sup>			NO <sub>x</sub> <sup>d</sup>			CO <sup>e</sup>		
	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING
Utility/Large Industrial Boilers (>100) (1-01-006-01, 1-01-006-04)									
Uncontrolled	9.6	0.6	A	8800	550 <sup>f</sup>	A	640	40	A
Controlled - Low NO <sub>x</sub> burners	9.6	0.6	A	1300	81 <sup>f</sup>	D	ND	ND	NA
Controlled - Flue gas recirculation	9.6	0.6	A	850	53 <sup>f</sup>	D	ND	ND	NA
Small Industrial Boilers (10 - 100) (1-02-006-02)									
Uncontrolled	9.6	0.6	A	2240	140	A	560	35	A
Controlled - Low NO <sub>x</sub> burners	9.6	0.6	A	1300	81 <sup>f</sup>	D	980	61	D
Controlled - Flue gas recirculation	9.6	0.6	A	480	30	C	590	37	C
Commercial Boilers (0.3 - <10) (1-03-006-03)									
Uncontrolled	9.6	0.6	A	1600	100	B	330	21	C
Controlled - Low NO <sub>x</sub> burners	9.6	0.6	A	270	17	C	425	27	C
Controlled - Flue gas recirculation	9.6	0.6	A	580	36	D	ND	ND	NA
Residential Furnaces (<0.3) (No SCC)									
Uncontrolled	9.6	0.6	A	1500	94	B	640	40	B

<sup>a</sup> Units are kg of pollutant/10<sup>6</sup> cubic meters natural gas fired and lb of pollutant/10<sup>6</sup> cubic feet natural gas fired. Based on an average natural gas fired higher heating value of 8270 kcal/m<sup>3</sup> (1000 Btu/scf). The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. ND = no data. NA = not applicable.

<sup>b</sup> SCC = Source Classification Code.

<sup>c</sup> Reference 7. Based on average sulfur content of natural gas, 4600 g/10<sup>6</sup> Nm<sup>3</sup> (2000 gr/10<sup>6</sup> scf).

Table 1.4-2 (cont.).

- <sup>d</sup> References 10,15-19. Expressed as  $\text{NO}_2$ . For tangentially fired units, use  $4400 \text{ kg}/10^6 \text{ m}^3$  ( $275 \text{ lb}/10^6 \text{ ft}^3$ ). At reduced loads, multiply factor by load reduction coefficient in Figure 1.4-1. Note that  $\text{NO}_x$  emissions from controlled boilers will be reduced at low load conditions.
- <sup>e</sup> References 9-10,16-18,20-21.
- <sup>f</sup> Emission factors apply to packaged boilers only.

Table 1.4-3 (Metric And English Units). EMISSION FACTORS FOR CARBON DIOXIDE (CO<sub>2</sub>) AND TOTAL ORGANIC COMPOUNDS (TOC) FROM NATURAL GAS COMBUSTION<sup>a</sup>

Combustor Type (Size, 10 <sup>6</sup> Btu/hr Heat Input) (SCC) <sup>b</sup>	CO <sub>2</sub> <sup>c</sup>			TOC <sup>d</sup>		
	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING	kg/10 <sup>6</sup> m <sup>3</sup>	lb/10 <sup>6</sup> ft <sup>3</sup>	RATING
Utility/large industrial boilers (> 100) (1-01-006-01, 1-01-006-04)	ND <sup>e</sup>	ND	NA	28 <sup>f</sup>	1.7 <sup>f</sup>	C
Small industrial boilers (10 - 100) (1-02-006-02)	1.9 E+06	1.2 E+05	D	92 <sup>g</sup>	5.8 <sup>g</sup>	C
Commercial boilers (0.3 - < 10) (1-03-006-03)	1.9 E+06	1.2 E+05	C	128 <sup>h</sup>	8.0 <sup>h</sup>	C
Residential furnaces (No SCC)	2.0 E+06	1.3 E+05	D	180 <sup>h</sup>	11 <sup>h</sup>	D

<sup>a</sup> All factors represent uncontrolled emissions. Units are kg of pollutant/10<sup>6</sup> cubic meters and lb of pollutant/10<sup>6</sup> cubic feet. Based on an average natural gas higher heating value of 8270 kcal/m<sup>3</sup> (1000 Btu/scf). The emission factors in this table may be converted to other natural gas heating values by multiplying the given factor by the ratio of the specified heating value to this average heating value.

NA = not applicable.

<sup>b</sup> SCC = Source Classification Code.

<sup>c</sup> References 10,22-23.

<sup>d</sup> References 9-10,18.

<sup>e</sup> ND = no data.

<sup>f</sup> Reference 8: methane comprises 17% of organic compounds.

<sup>g</sup> Reference 8: methane comprises 52% of organic compounds.

<sup>h</sup> Reference 8: methane comprises 34% of organic compounds.

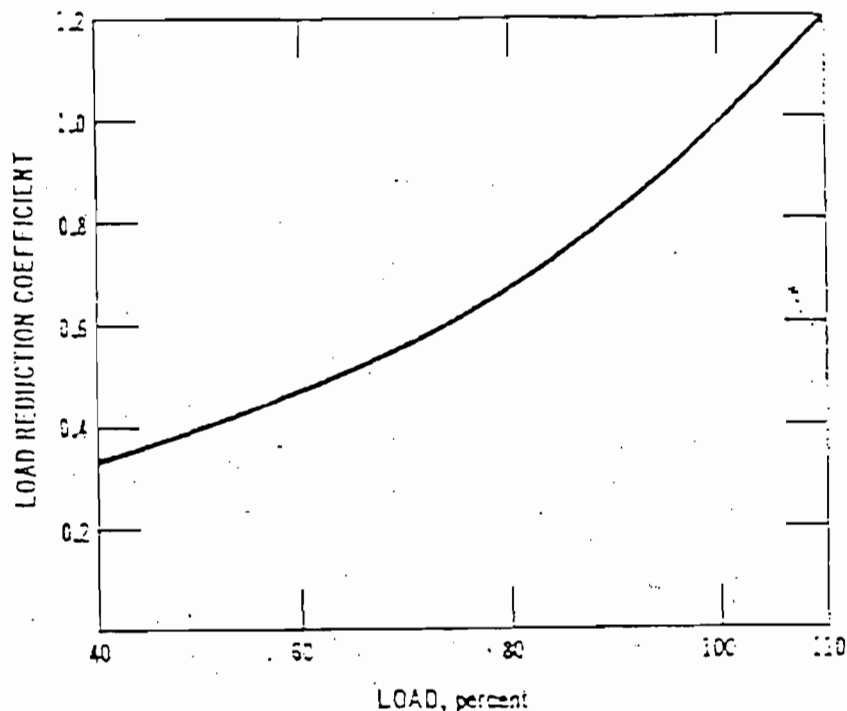


Figure 1.4-1. Load reduction coefficient as a function of boiler load.  
(Used to determine  $\text{NO}_x$  reductions at reduced loads in large boilers.)

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STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:

Florida Electric Power Coordinating Group, Inc., )

Petitioner. )

ASP No. 97-B-01

ORDER CORRECTING SCRIVENER'S ERROR

The Order which authorizes owners of natural gas fired fossil fuel steam generators to forgo particulate matter compliance testing on an annual basis and prior to renewal of an operation permit entered on the 17th day of March, 1997, is hereby corrected on page 4, paragraph number 4, by deleting the words "pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C.":

4. 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 particulate matter emission compliance test results for any fossil fuel steam generator emissions unit that burned liquid and/or solid fuel for a total of no more than 400 hours during the year prior to renewal.

DONE AND ORDERED this 2 day of July, 1997 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



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