LAKELAND
ELECTRIC & WATER

Excellence Is Our Goal, Service Is Our Job

(813) 499-6603

Farzie Shelton
ENVIRONMENTAL COORDINATOR, Ch E.

Mr. John C Brown (MS5505)
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

December 20, 1995

RE: **ACID RAIN TITLE IV PHASE II APPLICATION FOR LAKELAND ELECTRIC & WATER UTILITIES**

Dear Mr. Brown:

In compliance with 40 CFR Part 72 and Rule 62-210 F.A.C. we are submitting a revised completed form 62-210.900(1)(a) and three copies of same for our Larsen Power Plant.

Additionally, enclosed you will find a copy of **Certificate of Representation (OMB No. 2060-0221)** for each respective facility together with **Title IV Compliance Plan.**

With this submittal we are hoping to have satisfied all the requirements of Acid Rain Phase II Permit Application.

If you should have any questions, please do not hesitate to contact me at (941) 499-6603.

Sincerely

Farzie Shelton (Ms)
Environmental Division

Enc.

EPA

Certificate of Representation

For more information, see instructions and refer to 40 CFR 72.24

This submission is: [X] New [ ] Revised

STEP 1
Identify the source by plant name, State, and ORIS code from NADB

Plant Name	State	ORIS Code
C. D. McIntosh Jr.	FL	676

STEP 2
Enter requested information for the designated representative

Name: Ronald W. Tomlin, Assistant Managing Director

Address:
Lakeland Electric & Water Utilities
501 East Lemon Street
Lakeland, Florida 33801-5050

Phone Number: 813/499-8474
Fax Number: 813/499-6362

STEP 3
Enter requested information for the alternate designated representative (optional)

Name: Timothy C. Bates, Plant Manager

Address:
C. D. McIntosh Power Plant
3030 East Lake Parker Drive
Lakeland, Florida 33805-9513

Phone Number: 813/499-6601
Fax Number: 813/499-6688

STEP 4
Complete Step 5, read the certifications and sign and date

I certify that I was selected as the designated representative or alternate designated representative, as applicable, by an agreement binding on the owners and operators of the affected source and each affected unit at the source.

I certify that I have given notice of the agreement, selecting me as the designated representative or alternate designated representative, as applicable for the affected source and each affected unit at the source identified in this certificate of representation, daily for a period of one week in a newspaper of general circulation in the area where the source is located or in a State publication designed to give general public notice.

I certify that I have all necessary authority to carry out my duties and responsibilities under the Acid Rain Program on behalf of the owners and operators of the affected source and of each affected unit at the source and that each such owner and operator shall be fully bound by my actions, inactions, or submissions.

I certify that I shall abide by any fiduciary responsibilities imposed by the agreement by which I was selected as designated representative or alternate designated representative, as applicable.

I certify that the owners and operators of the affected source and of each affected unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, an affected unit, or where a utility or industrial customer purchases power from an affected unit under life-of-the-unit, firm power contractual arrangements, I certify that:

I have given a written notice of my selection as the designated representative or alternate designated representative, as applicable, and of the agreement by which I was selected to each owner and operator of the affected source and of each affected unit at the source; and

Allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement or, if such multiple holders have expressly provided for a different distribution of allowances by contract, that allowances and the proceeds of transactions involving allowances will be deemed to be held or distributed in accordance with the contract.

The agreement by which I was selected as the alternate designated representative includes a procedure for the owners and operators of the source and affected units at the source to authorize the alternate designated representative to act in lieu of the designated representative.

LAKELAND
ELECTRIC & WATER

Excellence Is Our Goal, Service Is Our Job

McINTOSH POWER PLANT
3030 E. LAKE PARKER DR.
LAKELAND, FLORIDA 33805

ph. (941) 499-6600
FAX: (941) 499-6688

December 14, 1995

Lakeland Electric & water Utilities
Title IV Compliance Plan

Lakeland Electric & Water utilities will hold sufficient SO_2 allowances to cover all SO_2 emissions for the generating units listed below. If it becomes apparent that Lakeland Electric & Water utilities will have insufficient SO_2 allowances, Lakeland Electric & Water Utilities will purchase additional allowances on the open market, or switch to lower sulfur content fuel in order to cover any shortfall.

PLANT NAME	BOILER ID	ORIS CODE
C.D. MCINTOSH.Jr,	1	676
	2	676
	3	676
LARSEN MEMORIAL	7	675
	8	675

501 E. Lemon St., Lakeland, FL 33801-5079 (941) 499-6835

Phase II Permit Application

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

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

		Compliance Plan		
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			

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.*

Phase II Permit - Page 2

Plant Name (from Step 1)
Larsen Memorial Power Plant

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

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 73.34(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.
(6) 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 12/6/95

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

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[x] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **McIntosh Unit 2-Fossil Fuel-Fired Steam Generator (FFFSG)**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **005**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This Emission Unit is a gas and oil fired steam generating unit.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

NOx Control incorporated in furnace design through the use of flue gas recirculation.

2. Control Device or Method Code: **26**

B.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	1 Apr 1976
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	115 MW
5. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	1,185	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		

5. Operating Capacity Comment (limit to 200 characters):

Maximum heat input based on HHV for natural gas. Heat input for residual oil is 1,115 MMBtu/hr. Heat Input based on fuel flow and sampling.

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

	hours/day		days/week
	weeks/yr	8,760	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment LMC-EU2-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **See Att. LMC-EU2-L1**
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Exhausts through a single stack.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **157** feet
7. Exit Diameter: **10.5** feet
8. Exit Temperature: **277** °F

9. Actual Volumetric Flow Rate:	**380,100** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **409.2** North (km): **3106.2**	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Residual (No.6) Oil

2. Source Classification Code (SCC):

   1-01-004-01

3. SCC Units:

   1,000 gallons

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
7.43	**65,087**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
0.7	

9. Million Btu per SCC Unit:

   150

10. Segment Comment (limit to 200 characters):

    Maximum hourly rate based on maximum heat input for oil firing. Unit can be co-fired with natural gas. No.2 fuel oil can be used.

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **1-01-006-01**	
3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **1.157**	5. Maximum Annual Rate: **10,133**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1,024**	
10. Segment Comment (limit to 200 characters): **Maximum hourly rate based on maximum heat input. Propane is used for ignition/start-up only (SCC 1-01-010-02)**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
SO2			EL
NOx	026		EL
CO			NS
VOC			NS
HCL			NS
PM10			NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **112** lb/hour **488** tons/year

4. Synthetically Limited? [ ] Yes [**X**] No

5. Range of Estimated Fugitive/Other Emissions:

[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.1 lb/MMBtu**

Reference: **See Comment**

7. Emissions Method Code:

[**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

0.1 lb/MMBtu x 1,115 MMBtu/hr = 111.5 lb/hr; 111.5 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 488.4 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Emission Factor Reference: FDEP Rule 62-296.405(2)(b), 40 CFR Part 60; Subpart D. Emissions based on oil firing.

Emissions Unit Information Section 2 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.1 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**112** lb/hour **488** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 5 or 17; if > 400 hr/yr oil**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Oil firing only; does not include allowance for excess emissions for startup, shutdown and malfunction [FDEP Rule 62-210.700(1) and 40 CFR 60.13]**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **892** lb/hour **3,907** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.8 lb/MMBtu** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.8 lb/MMBtu x 1,115 MMBtu/hr = 892 lb/hr; 892 lb/hr x 8,760 hr/yr x 1 ton/2,000 = 3,907.0 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: FDEP Rule 62-296.405(2)(c), 40 CFR Part 60; Subpart D. Emissions based on maximum heat input.**

Emissions Unit Information Section 2 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.8 lb/MMBtu**
4. Equivalent Allowable Emissions: **892** lb/hour **3,907** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Analysis**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on FDEP Rule 62-296.405(2)(c) and 40 CFR Part 60 Subpart D. Oil only methods PARR 1760 and D-240. 40 CFR 60.43(c) allows co-firing.**

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **NOx**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **335** lb/hour **1,465** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.3 lb/MMBtu** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.3 lb/MMBtu x 1,115 MMBtu/hr = 334.5 lb/hr; 334.5 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1,465.1 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: FDEP Rule 62-296.405(2)(d), 40 CFR Part 60; Subpart D. NOx control is integral to the boiler. Potential emissions based on oil firing.**

Emissions Unit Information Section 2 **of** 7

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.3 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**335** lb/hour **1,465** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 7, 7A, 7C, 7D, 7E**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable based on oil firing pursuant to 62-296.405(2)(d) and 62-296.800 FAC; 40 CFR Part 60, Subpart D, Sect. 60.44. If co-firing of oil and gas, the emission limit is prorated based on heat input.**	

B.

1. Basis for Allowable Emissions Code: **RULE**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**237** lb/hour **1,038** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 7, 7A, 7C, 7D, 7E**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Allowable based on natural gas firing pursuant to 62-296.405(2)(d) and 62-296.800 FAC; 40 CFR Part 60, Subpart D, Sect. 60.44. If co-firing oil and gas, emission limit is prorated based on heat input.**	

Emissions Unit Information Section 2 **of** 7

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **RULE**		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu/hr**		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions 0.2 to 0.3 lb/MMBtu/hr. 40 CFR 60.44(b) allows simultaneous firing of fuels.**		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20.** % Exceptional Conditions: **27.** % Maximum Period of Excess Opacity Allowed: **6** min/hour
4.	Method of Compliance: **Annual VE testing; EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-296.800; 40 CFR Part 60, Subpart D, Section 60.42(a).**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE99**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **None**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1). 40 CFR 60; 60.8(c); 60.11(c). Allowed for 2 hours (120 minutes) per 24 hour period for start-up, shut-down and malfunction.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 8

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Advanced Pollution Inst. Model Number: 152 Serial Number: 170	
5. Installation Date: 14 Dec 1994	
6. Performance Specification Test Date: 10 Nov 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75.	

Continuous Monitoring System Continuous Monitor 2 of 8

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Advanced Pollution Inst. Model Number: 252 Serial Number: 139	
5. Installation Date: 14 Dec 1994	
6. Performance Specification Test Date: 10 Nov 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 3 of 8

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: United Sciences Inc. Model Number: 500C Serial Number: 0993687	
5. Installation Date: 14 Dec 1994	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): COM required pursuant to 40 CFR Part 75	

Continuous Monitoring System Continuous Monitor 4 of 8

1. Parameter Code: CO2	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Milton Roy Model Number: 3300 Serial Number: N3K4430T	
5. Installation Date: 14 Dec 1994	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 5 of 8

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Air Monitor Model Number: CEM Serial Number: 6232D	
5. Installation Date: 14 Dec 1994	
6. Performance Specification Test Date: 10 Nov 1995	
7. Continuous Monitor Comment (limit to 200 characters): FLOW monitor required pursuant to 40 CFR Part 75.	

Continuous Monitoring System Continuous Monitor 6 of 8

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: SM810 Serial Number: 114994U	
5. Installation Date: 26 Feb 1985	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR 60.45	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 7 of 8

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: RM41 Serial Number: 598	
5. Installation Date: 26 Aug 1980	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): COM required pursuant to 40 CFR 60.45	

Continuous Monitoring System Continuous Monitor 8 of 8

1. Parameter Code: O2	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: CM50 Serial Number: 080798	
5. Installation Date: 26 Aug 1980	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR 60.45	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[X] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[ ] C	[ ] E	[X] Unknown
	SO_2	[ ] C	[ ] E	[X] Unknown
	NO_2	[ ] C	[ ] E	[X] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	Unit commenced construction prior to January 6, 1975.			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: LMC-EU2-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: LMC-EU2-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: LMC-EU2-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 1 Aug 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: LMC-EU2-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[x] Attached, Document ID: LMC-EU2-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [x] Not Applicable

12. Identification of Additional Applicable Requirements

[x] Attached, Document ID: LMC-EU2-L12 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [x] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[x] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: LMC-EU1-L14

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[ ] Not Applicable

ATTACHMENT LMC-EU2-D

EMISSIONS UNIT REGULATIONS

ATTACHMENT LMC-EU2-D

Applicable Requirements Listing - Power Plants Acid Rain Units

EMISSION UNIT ID: EU2 - McIntosh Plant - FFFSG Unit 2

FDEP Rules:

Air Pollution Control-General Provisions:

62-204.800(7)(b)1. (State Only)	- NSPS Subpart D
62-204.800(7)(c) (State Only)	- NSPS authority
62-204.800(7)(d)(State Only)	- NSPS General Provisions
62-204.800(12) (State Only)	- Acid Rain Program
62-204.800(13) (State Only)	- Allowances
62-204.800(14) (State Only)	- Acid Rain Program Monitoring
62-204.800(16) (State Only)	- Excess Emissions (Potentially applicable over term of permit)

Stationary Sources-General:

62-210.650	- Circumvention; EUs with control device
62-210.700(1)	- Excess Emissions; Malfunction, startup/shutdown
62-210.700(4)	- Excess Emissions; poor maintenance
62-210.700(6)	- Excess Emissions; notification

Acid Rain:

62-214.300	- All Acid Rain Units (Applicability)
62-214.320(1)(a),(2)	- All Acid Rain Units (Application Shield)
62-214.330(1)(a)1.	- Compliance Options (if 214.430)
62-214.340	- Exemptions (new units, retired units)
62-214.350(2);(3);(6)	- All Acid Rain Units (Certification)
62-214.370	- All Acid Rain Units (Revisions; correction; potentially applicable if a need arises)
62-214.430	- All Acid Rain Units (Compliance Options-if required)

Stationary Sources-Emission Standards:

62-296.405(2)	- New Sources

Stationary Sources-Emission Monitoring (where stack test is required):

62-297.310(1)	- All Units (Test Runs-Mass Emission)
62-297.310(2)(b)	- All Units (Operating Rate; other than CTs;no CT)
62-297.310(3)	- All Units (Calculation of Emission)
62-297.310(4)(a)	- All Units (Applicable Test Procedures;Sampling time)
62-297.310(4)(b)	- All Units (Sample Volume)
62-297.310(4)(c)	- All Units (Required Flow Rate Range-PM/H2SO4/F)
62-297.310(4)(d)	- All Units (Calibration)
62-297.310(4)(e)	- All Units (EPA Method 5-only)
62-297.310(5)	- All Units (Determination of Process Variables)

62-297.310(6)(a)	- All Units (Permanent Test Facilities-general)
62-297.310(6)(c)	- All Units (Sampling Ports)
62-297.310(6)(d)	- All Units (Work Platforms)
62-297.310(6)(e)	- All Units (Access)
62-297.310(6)(f)	- All Units (Electrical Power)
62-297.310(6)(g)	- All Units (Equipment Support)
62-297.310(7)(a)1.	- Applies mainly to CTs/Diesels
62-297.310(7)(a)2.	- FFSG excess emissions
62-297.310(7)(a)3.	- Permit Renewal Test Required
62-297.310(7)(a)4.a;	- Annual Test
62-297.310(7)(a)5.	- PM exemption if <400 hrs/yr
62-297.310(7)(a)6.	- PM FFSG semi annual test required if >200 hrs/yr
62-297.310(7)(a)7.	- PM quarterly monitoring if >100 hrs/yr
62-297.310(7)(a)9.	- FDEP Notification - 15 days
62-297.310(7)(c)	- Waiver of Compliance Tests (Fuel Sampling)
62-297.310(8)	- Test Reports

Federal Rules:

NSPS Subpart D:

40 CFR 60.42(a)(1)	- PM (0.1 lb/mmBtu)
40 CFR 60.42(a)(2)	- VE (20%;1-6min 27%)
40 CFR 60.43(a)(1)	- SO2; liquid fuel (0.8 lb/mmBtu)
40 CFR 60.43(a)(2)	- SO2; solid fuel (1.2 lb/mmBtu)
40 CFR 60.43(b)	- SO2; Simultaneous firing
40 CFR 60.43(c)	- SO2; compliance; allows gas co-firing
40 CFR 60.44(a)(1)	- NOx; gas (0.2 lb/mmBtu)
40 CFR 60.44(a)(2)	- NOx; oil (0.3 lb/mmBtu)
40 CFR 60.44(a)(3)	- NOx; coal (0.7 lb/mmBtu)
40 CFR 60.44(b)	- NOx; Simultaneous firing
40 CFR 60.45 (a)	- Monitoring; Requires CEMS; VE, SO2 & NOx
40 CFR 60.45(b)(2)	- Exempts SO2 CEMS for non-FGD units
40 CFR 60.45(b)(3)	- Exempts CEMS when tests 70% of standard
40 CFR 60.45(b)(4)	- If no CEMS than no O2 or CO2 required
40 CFR 60.45(c)	- Performance Requirements for CEMS
40 CFR 60.45(e)	- Conversion Procedures for CEMS
40 CFR 60.45(g)(1)	- Excess Emission Reports-Opacity
40 CFR 60.45(g)(2)	- Excess Emission Reports-SO2
40 CFR 60.45(g)(3)	- Excess Emission Reports-NOx (currently exempt < 70% STD)
40 CFR 60.46 (a)	- Test Methods for Performance tests
40 CFR 60.46 (b)	- Test Methods for PM, SO2 and NOx
40 CFR 60.46 (c)	- Fuel combinations

NSPS General Requirements:

40 CFR 60.7(a)(4)	- Notification and Recordkeeping (Physical/Operational change)
40 CFR 60.7(b)	- Notification and Recordkeeping (startup/shutdown/malfunction)

40 CFR 60.7(c)	- Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(d)	- Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(f)	- Notification and Recordkeeping (maintain records-2 yrs)
40 CFR 60.8(c)	- Performance Tests (representative conditions)
40 CFR 60.8(e)	- Provide Stack Sampling Facilities
40 CFR 60.8(f)	- Test Runs
40 CFR 60.11(a)	- Compliance (ref. S. 60.8 or Subpart; other than opacity)
40 CFR 60.11(b)	- Compliance (opacity determined EPA Method 9)
40 CFR 60.11(c)	- Compliance (opacity; excludes startup/shutdown/malfunction)
40 CFR 60.11(d)	- Compliance (maintain air pollution control equip.)
40 CFR 60.11(e)(2)	- Compliance (opacity; ref. S. 60.8)
40 CFR 60.12	- Circumvention
40 CFR 60.13(a)	- Monitoring (Appendix B; Appendix F)
40 CFR 60.13(c)	- Monitoring (Opacity COMS)
40 CFR 60.13(d)(1)	- Monitoring (CEMS; span, drift, etc.)
40 CFR 60.13(d)(2)	- Monitoring (COMS; span, system check)
40 CFR 60.13(e)	- Monitoring (frequency of operation)
40 CFR 60.13(f)	- Monitoring (frequency of operation)
40 CFR 60.13(h)	- Monitoring (COMS; data requirements)

Acid Rain-Permits:

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO2 Allowances-hold allowances
40 CFR 72.9(c)(2)	- SO2 Allowances-violation
40 CFR 72.9(c)(3)(iii)	- SO2 Allowances-Phase II Units (listed)
40 CFR 72.9(c)(4)	- SO2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	- SO2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(d)	- NOx Requirements
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; required
40 CFR 72.20(b)	- Designated Representative; legally binding
40 CFR 72.20(c)	- Designated Representative; certification requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing representatives; owners
40 CFR 72.24	- Certificate of representation
40 CFR 72.30(a)	- Requirements to Apply (operate)

40 CFR 72.30(b)(2)	- Requirements to Apply (Phase II-Complete)
40 CFR 72.30(c)	- Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	- Requirements to Apply (submittal requirements)
40 CFR 72.31	- Information Requirements; Acid Rain Applications
40 CFR 72.32	- Permit Application Shield
40 CFR 72.33(b)	- Dispatch System ID;unit/system ID
40 CFR 72.33(c)	- Dispatch System ID;ID requirements
40 CFR 72.33(d)	- Dispatch System ID;ID change
40 CFR 72.40(a)	- General; compliance plan
40 CFR 72.40(b)	- General; multi-unit compliance options
40 CFR 72.40(c)	- General; conditional approval
40 CFR 72.40(d)	- General; termination of compliance options
40 CFR 72.51	- Permit Shield
40 CFR 72.90	- Annual Compliance Certification

Monitoring Part 75:

40 CFR 75.4	- Compliance Dates;
40 CFR 75.5	- Prohibitions
40 CFR 75.10(a)(1)	- Primary Measurement; SO2;
40 CFR 75.10(a)(2)	- Primary Measurement; NOx;
40 CFR 75.10(a)(3)(i)	- Primary Measurement; CO2; monitor
40 CFR 75.10(a)(3)(ii)	- Primary Measurement; CO2; Appendix G
40 CFR 75.10(a)(4)	- Primary Measurement; Opacity;
40 CFR 75.10(b)	- Primary Measurement; Performance Requirements
40 CFR 75.10(c)	- Primary Measurement; Heat Input; Appendix F
40 CFR 75.10(d)	- Primary Measurement; Hourly Operating ; Opacity; SO2
40 CFR 75.10(f)	- Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	- Primary Measurement; Minimum Recording
40 CFR 75.11(d)	- SO2 Monitoring; Gas- and Oil-fired units
40 CFR 75.11(e)	- SO2 Monitoring; Gaseous firing
40 CFR 75.12(a)	- NOx Monitoring; Coal; Non-peaking oil/gas units
40 CFR 75.12(b)	- NOx Monitoring; Determination of NOx emission rate; Appendix F
40 CFR 75.13(a)	- CO2 Monitoring; Continuous monitor
40 CFR 75.13(b)	- CO2 Monitoring; Appendix G
40 CFR 75.14(a)	- Opacity Monitoring; Coal and oil units
40 CFR 75.20(a)	- Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	- Recertification Procedures (if recertification necessary)
40 CFR 75.20(c)	- Certification Procedures (if recertification necessary)
40 CFR 75.20(f)	- Alternate Monitoring system
40 CFR 75.20(g)	- Exceptions to CEMS; oil/gas/diesel; Appendix D & E
40 CFR 75.21(a)	- QA/QC; CEMS; Appendix B (Suspended 7/17/95-12/31/96)
40 CFR 75.21(b)	- QA/QC; Opacity; Part 51 Appendix M

40 CFR 75.21(c)	- QA/QC; Calibration Gases
40 CFR 75.21(d)	- QA/QC; Notification of RATA
40 CFR 75.21(e)	- QA/QC; Audits
40 CFR 75.21(f)	- QA/QC; CEMS (Effective 7/17/96-12/31/96)
40 CFR 75.22	- Reference Methods
40 CFR 75.24	- Out-of-Control Periods; CEMS
40 CFR 75.30(a)(1)	- General Missing Data Procedures; SO2
40 CFR 75.30(a)(2)	- General Missing Data Procedures; flow
40 CFR 75.30(a)(3)	- General Missing Data Procedures; NOx
40 CFR 75.30(a)(4)	- General Missing Data Procedures; SO2
40 CFR 75.30(b)	- General Missing Data Procedures; certified backup monitor
40 CFR 75.30(c)	- General Missing Data Procedures; certified backup monitor
40 CFR 75.30(d)	- General Missing Data Procedures; SO2 (optional before 1/1/97)
40 CFR 75.30(e)	- General Missing Data Procedures; bypass/multiple stacks
40 CFR 75.31	- Initial Missing Data Procedures (new/re-certified CMS)
40 CFR 75.32	- Monitoring Data Availability for Missing Data
40 CFR 75.33	- Standard Missing Data Procedures
40 CFR 75.35	- Missing Data for CO2
40 CFR 75.36	- Missing Data for Heat Input
40 CFR 75.40	- Alternate Monitoring Systems-General
40 CFR 75.41	- Alternate Monitoring Systems-Precision Criteria
40 CFR 75.42	- Alternate Monitoring Systems-Reliability Criteria
40 CFR 75.43	- Alternate Monitoring Systems-Accessability Criteria
40 CFR 75.44	- Alternate Monitoring Systems-Timeliness Criteria
40 CFR 75.45	- Alternate Monitoring Systems-Daily QA
40 CFR 75.46	- Alternate Monitoring Systems-Missing data
40 CFR 75.47	- Alternate Monitoring Systems-Criteria for Class
40 CFR 75.48	- Alternate Monitoring Systems-Petition
40 CFR 75.53	- Monitoring Plan ; revisions
40 CFR 75.54(a)	- Recordkeeping-general
40 CFR 75.54(b)	- Recordkeeping-operating parameter
40 CFR 75.54(c)	- Recordkeeping-SO2
40 CFR 75.54(d)	- Recordkeeping-NOx
40 CFR 75.54(e)	- Recordkeeping-CO2
40 CFR 75.54(f)	- Recordkeeping-Opacity
40 CFR 75.55(c)	- General Recordkeeping (Specific Situations)
40 CFR 75.55(e)	- General Recordkeeping (Specific Situations)
40 CFR 75.56	- Certification; QA/QC Provisions
40 CFR 75.60	- Reporting Requirements-General
40 CFR 75.61	- Reporting Requirements-Notification cert/recertification
40 CFR 75.62	- Reporting Requirements-Monitoring Plan

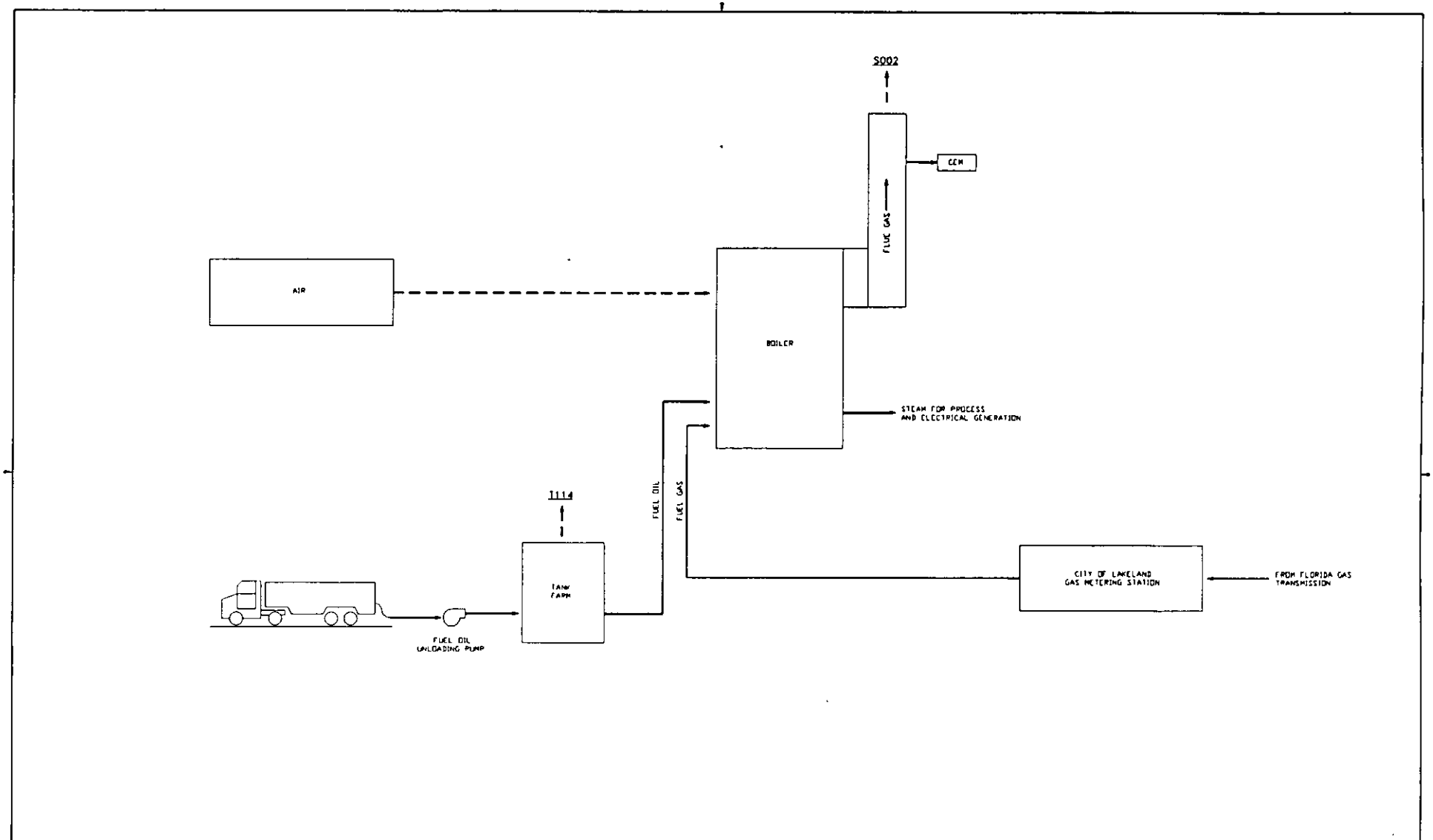
40 CFR 75.63	- Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	- Reporting Requirements-Quarterly reports; submission
40 CFR 75.64(b)	- Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	- Rep. Req.; Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Rep. Req.; Quarterly reports; Electronic format
40 CFR 75.65	- Opacity Reports
40 CFR 75.66	- Petitions to the Administrator (if required)
Appendix A-1.	- Installation and Measurement Locations
Appendix A-2.	- Equipment Specifications
Appendix A-3.	- Performance Specifications
Appendix A-4.	- Data Handling and Acquisition Systems
Appendix A-5.	- Calibration Gases
Appendix A-6.	- Certification Tests and Procedures
Appendix A-7.	- Calculations
Appendix B	- QA/QC Procedures
Appendix C-1.	- Missing Data; SO2/NOx for controlled sources
Appendix C-2.	- Missing Data; Load-Based Procedure; NOx & flow
Appendix D	- Optional SO2; Oil-/gas-fired units
Appendix F	- Conversion Procedures
Appendix G-2.	- Determination of CO2; from combustion sources
Appendix H	- Traceability Protocol

Acid Rain Program-Excess Emissions (these are future requirements that may become applicable during the term of the Title V permit):

40 CFR 77.3	- Offset Plans (future)
40 CFR 77.5(b)	- Deductions of Allowances (future)
40 CFR 77.6	- Excess Emissions Penalties (SO2 and NOx;future)

ATTACHMENT LMC-EU2-L1

PROCESS FLOW DIAGRAM



REV. NO	BY	DATE	APPR.	REVISION
2	MG	5-28-96	MP	ISSUED FOR TITLE V
1	MG	5-15-96	MP	CHANGE TITLE

LAKELAND ELECTRIC & WATER

DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
UNIT NO. 2
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MDIEGER
DATE 9-19-94
APPR BY:

CAD | SCALE NONE
PROJ NO. AIR PERMIT
DWG. NO. LMC-EU2-L1/SKM-26 | REV. 2

SIZE B

ATTACHMENT LMC-EU2-L2

FUEL ANALYSIS OR SPECIFICATION

Attachment LMC-EU2-L2

Fuel Analysis

Natural Gas Analysis

Parameter	Typical Value	Max Value
Relative density	0.58 (compared to air)	
heat content	950 - 1124 Btu/cu ft. (HHV)	
% sulfur	0.43 grains/CCF [1]	1 grain/100 CF
% nitrogen	0.8% by volume	
% ash	negligible	

Note: The values listed are "typical" values based upon information supplied by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data from laboratory analysis

Attachment LMC-EU2-L2

Fuel Analysis

No. 6 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	8[1]	-
Relative density	8.2 lb/gal [2]	
Heat content	18,300 Btu / lb (HHV)	
% sulfur	0.7 [2]	0.728 [3]
% nitrogen	0.25 - 0.50	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from the fuel procurement specification

[2] Data from laboratory analysis

[3] Data to meet 0.8 lb/10^6 BTU for oil firing only; when co-firing with natural gas, the sufur content can be as high as 2.5 percent.

Attachment LMC-EU2-L2

Fuel Analysis

No. 2 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	30[1]	-
Relative density	6.92 lb/gal [2]	
Heat content	18,400 Btu / lb (LHV)	
% sulfur	< 0.5 [2]	0.5 [3]
% nitrogen	0.025 - 0.030	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from the fuel procurement specification

[2] Data from laboratory analysis

[3] Data from current air permit.

Attachment LMC-EU2-L2

Fuel Analysis

Propane Analysis

Parameter	Typical Value
heat content	81 Btu/gal
% sulfur	negligible
% nitrogen	0.8% by volume
% ash	negligible

ATTACHMENT LMC-EU2-L4

DESCRIPTION OF STACK SAMPLING FACILITIES

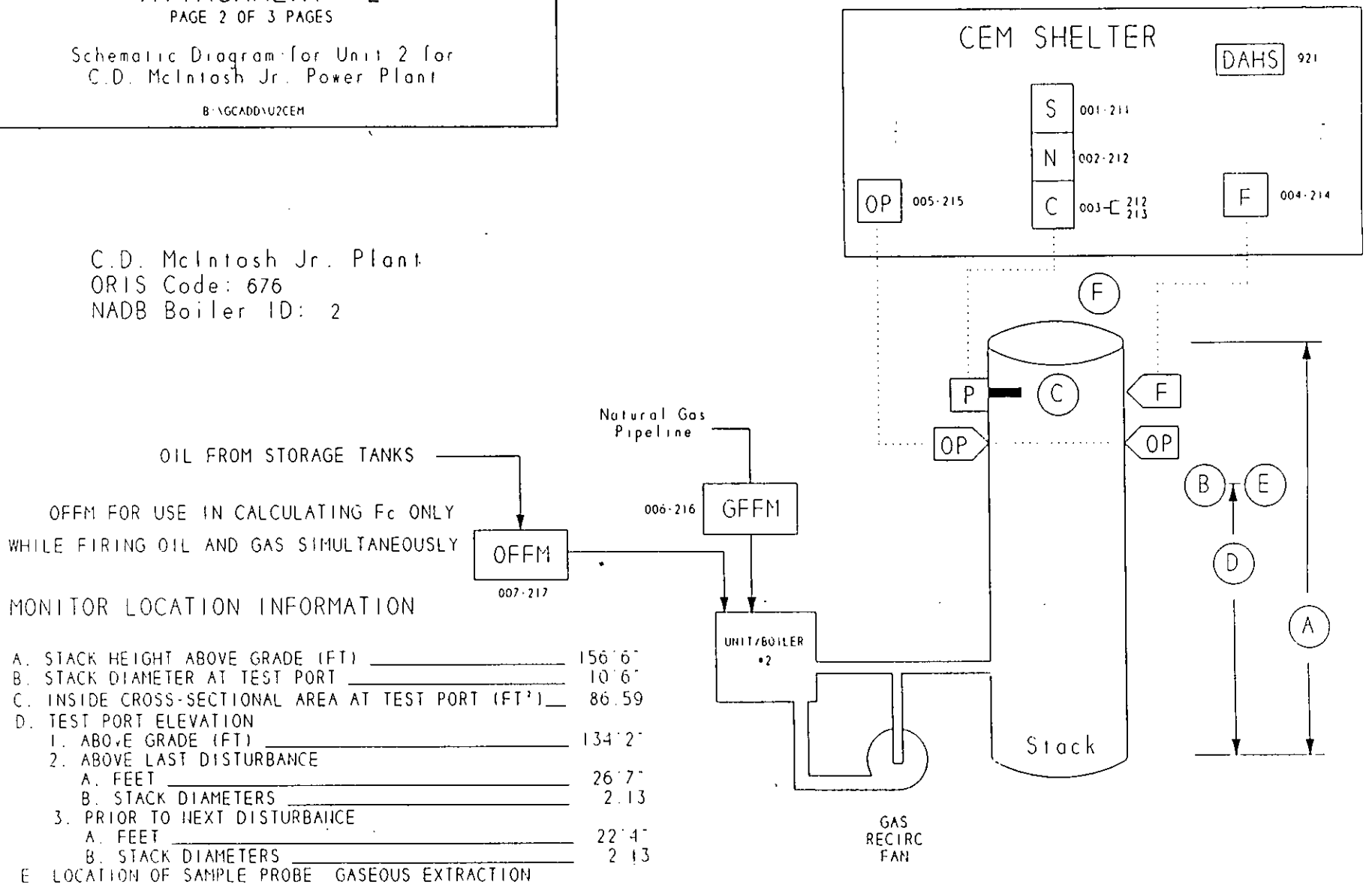
ATTACHMENT #2

PAGE 2 OF 3 PAGES

Schematic Diagram for Unit 2 for C.D. McIntosh Jr. Power Plant

B:\GCADD\U2CEM

C.D. McIntosh Jr. Plant
ORIS Code: 676
NADB Boiler ID: 2



MONITOR LOCATION INFORMATION

A. STACK HEIGHT ABOVE GRADE (FT)	156'6"
B. STACK DIAMETER AT TEST PORT	10'6"
C. INSIDE CROSS-SECTIONAL AREA AT TEST PORT (FT²)	86.59
D. TEST PORT ELEVATION	
1. ABOVE GRADE (FT)	134'2"
2. ABOVE LAST DISTURBANCE	
A. FEET	26'7"
B. STACK DIAMETERS	2.13
3. PRIOR TO NEXT DISTURBANCE	
A. FEET	22'4"
B. STACK DIAMETERS	2.13
E. LOCATION OF SAMPLE PROBE GASEOUS EXTRACTION PROBE IS IN SAME PLANE AS TEST PORT. OPACITY PROBE AT 1.0 FT. ABOVE SAMPLE PROBE ELEVATION.	
F. INSIDE CROSS-SECTIONAL AREA AT FLUE EXIT (FT²)	86.59

LMC-EU2-L4

ATTACHMENT LMC-EU2-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT LMC-EU2-L6

PROCEDURES FOR STARTUP AND SHUTDOWN MINIMIZING EXCESS EMISSIONS

Startup of the fossil-fuel boilers begins when fuel (propane, natural gas or No. 2 fuel oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable and above 10-15 percent load.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased to below 10-15 percent of maximum and continues until the final burner gun is removed from service.

Emissions may be detected during all modes of boiler operation by various continuous emissions monitors. Continuous monitors are currently in place for NO_x, CO_2, SO_2, flow and opacity. Audible and visual alarms are activated whenever the permitted value for opacity is approached.

Countermeasures which may be taken in the event of excess emissions include, but are not limited to:

- burner elevation loading
- proper excess air adjustments
- recognizing and removal of faulty burners
- fuel oil temperature adjustments
- proper and timely operation of boiler cleaning devices
- removal of the unit from system-dispatch mode (load control)
- reduction of unit megawatt load
- stopping and restarting of boiler cleaning devices
- lowering load ramp rate
- pressure rate changes
- placing boiler controls on manual
- adjusting burner dampers to increase windbox/furnace air pressure

Knowledge of the appropriate countermeasures to take when excess emissions occur is a part of the routine operator training for those who operate the boilers. Topics include current permit limits,

maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, and fuels and combustion training.

ATTACHMENT LMC-EU2-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT LMC-EU2-L10
ALTERNATIVE METHODS OF OPERATION
FOSSIL FUEL STEAM GENERATOR

The fossil fuel steam generator can operate on both natural gas and fuel oil (No. 6 through No. 2 fuel oil). The maximum sulfur content in the fuel oil shall not exceed 2.5 percent. The No. 2 fuel oil is used as pilot fuel during startup, shutdown, and malfunctions. This unit can operate for the entire year at varying loads (i.e., 8,760 hours 0 to 100 percent load) and can fire fuels, alone or in combination, with no restrictions on hours of operation.

ATTACHMENT LMC-EU2-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

ATTACHMENT LMC-EU2-L12

REQUEST TO CHANGE CONDITIONS OF THE AIR CONSTRUCTION/PSD PERMIT THAT ARE OBSOLETE AND OUTDATED

This request is to exclude from the Title V permit, several conditions of the FDEP issued air construction permit (AC53-2244) that are obsolete and outdated. This request is made pursuant to FDEP's Guidance on Implementation of Existing Permit Conditions Into Title V Permits (DARM-PER/V-14; February 8, 1996).

Specific Conditions 1,2, 4, 5, 6 and 10 deal with initial operation and compliance activities that have already been completed. These conditions are outdated and obsolete. Specific Condition 7 is outdated by Rule 62-297.310(6). Specific Condition 9 is not unit specific and is outdated by Rule 62-296.320(4)(c).

ADDITIONAL APPLICABLE REQUIREMENTS

Applicable Requirements as defined in Rule 62-210.200(29) not identified in Section D of this emission unit section are included in this attachment of the application. Any air operation permit issued by the Department (or local program designee) and included in this attachment is provided for information purposes. The specific conditions of the operating permit are not Applicable Requirements as defined in Rule 62-210.200(29) unless implementing a specific Applicable Requirement of the Department's rules (e.g., emission limitations and consent orders).

MAY 27 1976

J. A. LIBEY, Supt. of Generation
DEPT. OF ELECTRIC & WATER UTILITIES
CITY OF LAKELAND
LAKELAND, FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

CENTRAL SUBDISTRICT
P.O. BOX 9205
500 E. CENTRAL AVENUE
WINTER HAVEN, FLORIDA 33880

REUBIN O'D. ASKEW
GOVERNOR

JOSEPH W. LANDERS JR.
SECRETARY

May 25, 1976

Mr. C. D. McIntosh, Jr., Director
Department of Electric & Water Utilities
P. O. Box 368
Lakeland, Florida 33801

POLK CO. AP
DEPT. OF ELECTRIC &
WATER UTILITIES

Dear Mr. McIntosh:

Pursuant to your recent application, please find enclosed a permit (No. AC53-2244) dated 10-9-73 to construct/ ~~operate~~ the subject pollution source.

This permit will expire on 8-30-76 , and will be subject to the conditions, requirements and restrictions checked or indicated otherwise in the attached sheet "Construction/~~Operation~~ Permit Conditions".

This permit is issued under the authority of Florida Statute 403.061(16). The time limits imposed herein are a condition to this permit and are enforceable under Florida Statute 403.161. You are hereby placed on Notice that the Department will review this permit before the scheduled date of expiry and will seek court action for violation of the conditions and requirements of this permit.

You have ten days from the date of receipt hereof within which to seek a review of the conditions and requirements contained in this permit. Failure to file a written request to review or modify the conditions or requirements contained in this permit shall be deemed a waiver of any objections thereto.

Your continued cooperation in this matter is appreciated and in future communication please refer to your permit number.

Yours very truly,

J. H. Kerns, P.E.
Chief of Permitting

JHK:bat

cc: Central Files

8/75
FS 3

CONSTRUCTION PERMIT PROVISOS

AIR POLLUTION SOURCES

Permit No. AC53-2244 Date: 10-9-73

1. Construction of this installation shall be completed by December 1, 1975. Application for Permit to Operate to be submitted by August 30, 1976.

(X) 2. This construction permit expires on August 30, 1976 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Department of Environmental Regulation Commission.

(X) 3. All applicable rules of the Department including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction.

(X) 4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Environmental Regulation for consideration toward the issuance of an operation permit.

(X) 5. This steam boiler Unit #2 shall be tested* for particulates, sulfur dioxides, and nitrogen oxides within 30 days after it is placed in operation. These test results are required prior to our issuance of an operation permit and shall be submitted in duplicate to the Florida Department of Environmental Regulation 500 East Central Avenue, Suite 238, Winter Haven, FL 33880.

* Fuel Analysis May be Submitted for Required Sulfur Dioxide Emission Test.

(X) 6. The operation of this installation shall be observed for visible emissions in accordance with Method 9-Visible Determination of the Opacity of Emissions from Stationary Sources (36FR24895; Federal Register, December 23, 1971). The observation results are required prior to our issuance of an operation permit, and shall be submitted in duplicate to the Department of Environmental Regulation District Office, 500 East Central Avenue, Suite 238, Winter Haven, Florida 33880

(X) 7. Satisfactory ladders, platforms, and other safety devices shall be provided/available as well as necessary ports to facilitate the carrying out of an adequate sampling program.

( ) 8. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.

(X) 9. All fugitive dust generated at this site shall be adequately controlled.

(X) 10. Issuance of this permit does not indicate an endorsement or approval of any other required permits by this Department.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

NEDS POINT ID 0004

CONSTRUCTION PERMIT

FOR City of Lakeland
Dept. Electric & Water Utilities
P.O. Box 368
Lakeland, Florida 33803

PERMIT NO. AC53-2244 DATE OF ISSUE 10-9-73

PURSUANT TO THE PROVISIONS OF SECTIONS 403.061(16) AND 403.707 OF CHAPTER 403, FLORIDA STATUTES AND CHAPTERS 17-4 AND 17-7 FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:

Mr. C. D. McIntosh, Jr., Director

FOR THE CONSTRUCTION OF THE FOLLOWING:

Plant No. 3, Unit No. 2, Babcock & Wilcox steam generator producing 19,500,000 lbs/of steam per day consuming 4,213.5 barrels per day of 0.77% sulfur fuel oil. Subject to attached conditions nos. 1, 2, 3, 4, 5, 6, 7, 9, and 10.

LOCATED AT Plant No. 3 on Northern shore of Lake Parker, Lakeland, Polk Co., FL UTM: 17409.1E 3106.0N

IN ACCORDANCE WITH THE APPLICATION DATED February 14, 1976

ANY CONDITIONS OR PROVISOS WHICH ARE ATTACHED HERETO ARE INCORPORATED INTO AND MADE A PART OF THIS PERMIT AS THOUGH FULLY SET FOURTH HEREIN. FAILURE TO COMPLY WITH SAID CONDITIONS OR PROVISOS SHALL CONSTITUTE A VIOLATION OF THIS PERMIT AND SHALL SUBJECT THE APPLICANT TO SUCH CIVIL AND CRIMINAL PENALTIES AS PROVIDED BY LAW.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ISSUE UNTIL August 30, 1976 OR UNTIL REVOKED OR SURRENDERED AND SHALL BE SUBJECT TO ALL LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

DISTRICT ENGINEER

JOSEPH W. LANDERS, JR.
SECRETARY

DISTRICT MANAGER

JLT

This permit is an extension of construction permit AC53-2244.

DER FS 7
8/75

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[x] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **McIntosh Unit 3-Fossil Fuel-Fired Steam Generator (FFFSG)**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **006**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This Emission Unit is a coal fired steam generating unit which also co-fires refuse-derived fuel and petroleum coke.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters): **Electrostatic Precipitator (ESP)**
2. Control Device or Method Code: **10**

B.

1. Description (limit to 200 characters): **Flue Gas Desulfurization (FGD) System**
2. Control Device or Method Code: **67**

C.

1. Description (limit to 200 characters): **Low-NOx Burner**
2. Control Device or Method Code: **24**

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	**1 Sep 1982**
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	**364** MW
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		**3,640**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			

5. Operating Capacity Comment (limit to 200 characters):

Emissions unit co-fires coal and refuse-derived fuel (RDF) and coal, petroleum coke and/or RDF; The EU is also authorized to burn residual oil and gas. Heat Input based on fuel flow and sampling.

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

	hours/day		days/week
	weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment LMC-EU3-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **See Att. LMC-EU3-L1**	
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Exhausts through a single stack**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Not Applicable**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W	
6. Stack Height:	**250** feet
7. Exit Diameter:	**18** feet
8. Exit Temperature:	**167** °F

9. Actual Volumetric Flow Rate:	**1,260,536** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **409.3** North (km): **3106.3**	
14. Emission Point Comment (limit to 200 characters): **Stack parameters reflect design conditions. Exit temp is operated >167°F during normal operation. For oil firing with no SO2 scrubbing, the estimated exit gas temp= 250°F,Flow= 1,093,685 ACFM**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Coal**	
2. Source Classification Code (SCC): **1-01-001-01**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate: **159.6**	5. Maximum Annual Rate: **1,398,096**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **3.3**	8. Maximum Percent Ash: **16**
9. Million Btu per SCC Unit: **23**	
10. Segment Comment (limit to 200 characters): **See Attachment LMC-EU3-F10**	

Segment Description and Rate: Segment 2 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Coal and RDF (90/10 heat input basis)**	
2. Source Classification Code (SCC): **1-01-001-01**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate: **184.1**	5. Maximum Annual Rate: **1,612,716**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **2.9**	8. Maximum Percent Ash: **17**
9. Million Btu per SCC Unit: **22**	
10. Segment Comment (limit to 200 characters): **See Attachment LMC-EU3-F10**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 3 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Oil**	
2. Source Classification Code (SCC): **1-01-004-01**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **24.268**	5. Maximum Annual Rate: **212,584**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.73**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **150**	
10. Segment Comment (limit to 200 characters): **See Attachment LMC-EU3-F10**	

Segment Description and Rate: Segment 4 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Oil and RDF (90/10 heat input basis)**	
2. Source Classification Code (SCC): **1-01-004-01**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **21.84**	5. Maximum Annual Rate: **192,318**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.73**	8. Maximum Percent Ash: **2**
9. Million Btu per SCC Unit: **150**	
10. Segment Comment (limit to 200 characters): **See Attachment LMC-EU3-F10**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 5 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Coal and petroleum coke (80/20 weight basis)

2. Source Classification Code (SCC):

   1-01-001-01

3. SCC Units:

   Tons

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
152.6	**1,336,776**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
3.3	**15**

9. Million Btu per SCC Unit:

   24

10. Segment Comment (limit to 200 characters):

    See Attachment LMC-EU3-F10

Segment Description and Rate: Segment 6 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Coal, petroleum coke, and RDF. (80/20 weight basis at 90% of heat input; RDF at 10% heat input)**	
2. Source Classification Code (SCC): **1-01-001-01**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate: **168.8**	5. Maximum Annual Rate: **1,478,688**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **3.3**	8. Maximum Percent Ash: **15**
9. Million Btu per SCC Unit: **22**	
10. Segment Comment (limit to 200 characters): **See Attachment LMC-EU3-F10**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 7 of 7

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Natural Gas

2. Source Classification Code (SCC):

   1-01-006-01

3. SCC Units:

   Million Cubic Feet

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
3.555	**31,139**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:

9. Million Btu per SCC Unit:

   1,024

10. Segment Comment (limit to 200 characters):

    Natural gas is proposed as a supplementary fuel. Heat content of mixture based on maximum hourly rate (TPH) and maximum heat input rating for unit of 3,640 MMBtu/hr.

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	010		EL
SO2	067		EL
NOx	024		EL
CO			NS
VOC			NS
H107	067		NS
HCL	067		NS
PM10	010		NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM**
2. Total Percent Efficiency of Control: **99.1** %
3. Potential Emissions: **273** lb/hour **1,196** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.075 lb/MMBtu** Reference: **PSD-FL-008(B)**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.075 lb/MMBtu x 3,640 MMBtu/hr = 273.0 lb/hr; 273 lb/hr x 8,760 hr/yr x 1 ton/2,000 = 1,195.7 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **See Attachment LMC-EU3-H9**

Emissions Unit Information Section 3 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:	**OTHER**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.075** **lb/MMBtu**
4. Equivalent Allowable Emissions:	**273** lb/hour **1,196** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 5 and 5B; if > 400 hrs**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**The allowable emission limit is based on PSD-FL-008(B) for Oil/RDF Firing.**

B.

1. Basis for Allowable Emissions Code:	**OTHER**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.07** **lb/MMBtu**
4. Equivalent Allowable Emissions:	**254.8** lb/hour **1,116** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 5 and 5B; if > 400 hrs**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**The allowable emission limit is based on PSD-FL-008(B) for oil firing.**

Emissions Unit Information Section 3 of 7

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**182** lb/hour **797** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Methods 5 and 5B**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The allowable emission limit is based on PSD-FL-008(B) for coal/RDF firing and coal/RDF/pet coke firing.**	

B.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.044 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**160** lb/hour **702** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Methods 5 and 5B**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **The allowable emission limit is based on PSD-FL-008(B) for coal firing and coal/pet coke.**	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: **85** %
3. Potential Emissions: **4,368** lb/hour **19,132** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **1.2 lb/MMBtu** Reference: **See Comment**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **1.2 lb/MMBtu x 3,640 MMBtu/hr = 4,368 lb/hr; 4,368 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 19,131.8 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: 40 CFR 60.43(a)(2), PSD-FL-008(B). Emissions based on maximum heat input.**

Emissions Unit Information Section 3 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:	**OTHER**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**1.2 lb/MMBtu**
4. Equivalent Allowable Emissions:	**4,368** lb/hour **19,131** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 6 and 6C**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**See Attachment LMC-EU3-H6**

B.

1. Basis for Allowable Emissions Code:	**RULE**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.8 lb/MMBtu**
4. Equivalent Allowable Emissions:	**2,912** lb/hour **12,754.6** tons/year
5. Method of Compliance (limit to 60 characters):	**Fuel Analysis test**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**Oil Firing; the allowable emission limit is based on 40 CFR Part 60, Subpart D, Section 60.43(a)(1) for oil firing; PSD-FL-008(B).**

Emissions Unit Information Section 3 **of** 7

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.718 lb/MMBtu**	
4. Equivalent Allowable Emissions:	**2,613.5** lb/hour **11,447** tons/year
5. Method of Compliance (limit to 60 characters): **CEM**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **See Attachment LMC-EU3-H6**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **NOx**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **2,548** lb/hour **11,160** tons/year
4. Synthetically Limited? [ ] Yes [**x**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.7 lb/MMBtu** Reference: **See Comment**
7. Emissions Method Code: [**x**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **0.7 lb/MMBtu x 3,640 MMBtu/hr = 2,548 lb/hr; 2,548 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 11,160.2 TPY**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emission Factor Reference: FDEP Rule 62-204.800(7)(b)1. 40 CFR 60.44. Potential emissions based on coal firing.**

Emissions Unit Information Section 3 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:	**RULE**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.7 lb/MMBtu**
4. Equivalent Allowable Emissions:	**2,548** lb/hour **11,160** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 7,7A,7C,7D,7E**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**Coal/Pet Coke/RDF firing; based on FDEP Rule 62-204.800(7)(b)1.; 40 CFR Part 60, Subpart D, Section 60.44(a)(3); PSD-FL-008.**

B.

1. Basis for Allowable Emissions Code:	**RULE**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.3 lb/MMBtu**
4. Equivalent Allowable Emissions:	**1,092** lb/hour **4,783** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 7,7A,7C,7D,7E**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**Oil firing, based on FDEP Rule 62-204.800; 40 CFR 60.44(a)(2); PSD-FL-008.**

Emissions Unit Information Section 3 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:	**RULE**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**0.2 lb/MMBtu/hr**
4. Equivalent Allowable Emissions:	**728** lb/hour **3,188.6** tons/year
5. Method of Compliance (limit to 60 characters):	**Annual stack test; EPA Methods 7,7A,7C,7D,7E**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**Gas firing; based on FDEP Rule 62-204.800(7)(b)1.; 40 CFR 60, Subpart D, Section 60.44(a)(1); PSD-FL-008.**

B.

1. Basis for Allowable Emissions Code:	**RULE**
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	**See Comment**
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	**Requested Allowable Emissions and Units = 0.2 to 0.7 lb/MMBtu. 40 CFR 60.44(b) allows co-firing of fuels.**

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20.** % Exceptional Conditions: **27.** % Maximum Period of Excess Opacity Allowed: **6** min/hour
4.	Method of Compliance: **Annual VE testing; EPA Method 9**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-204.800(7)(b)1.; 40 CFR 60.42(a)(2); PSD-FL-008.**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE99**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **None**
5.	Visible Emissions Comment (limit to 200 characters): **Excess VE emissions allowed under FDEP Rule 62-210.700(1) and 40 CFR 60.8(c)/60.11(c) for startup, shut down, or malfunction conditions. Allowed for 2 hours (120 minutes) per 24 hours.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 8

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Advanced Pollution Inst. Model Number: 152 Serial Number: 172	
5. Installation Date: 09 Nov 1994	
6. Performance Specification Test Date: 01 Dec 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75; PSD-FL-008.	

Continuous Monitoring System Continuous Monitor 2 of 8

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Advanced Pollution Inst. Model Number: 252 Serial Number: 165	
5. Installation Date: 09 Nov 1994	
6. Performance Specification Test Date: 01 Dec 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75; PSD-FL-008.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 3 of 8

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: United Sciences Inc. Model Number: 500C Serial Number: 0993688	
5. Installation Date: 09 Nov 1994	
6. Performance Specification Test Date: 01 Dec 1995	
7. Continuous Monitor Comment (limit to 200 characters): COM required pursuant to 40 CFR Part 75; PSD-FL-008.	

Continuous Monitoring System Continuous Monitor 4 of 8

1. Parameter Code: CO2	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Milton Roy Model Number: 3300 Serial Number: N3L2487T	
5. Installation Date: 09 Nov 1994	
6. Performance Specification Test Date: 01 Dec 1995	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR Part 75	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 5 of 8

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Air Monitor Model Number: CEM Serial Number: 6233D	
5. Installation Date: 09 Nov 1994	
6. Performance Specification Test Date: 10 Nov 1995	
7. Continuous Monitor Comment (limit to 200 characters): FLOW monitor required pursuant to 40 CFR Part 75	

Continuous Monitoring System Continuous Monitor 6 of 8

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: SM810 Serial Number: 29259M	
5. Installation Date: 17 Sep 1982	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): CEM required pursuant to 40 CFR 60.45	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 7 of 8

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: CM50 Serial Number: 291230	
5. Installation Date: 17 Sep 1982	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): COM required pursuant to 40 CFR 60.45.	

Continuous Monitoring System Continuous Monitor 8 of 8

1. Parameter Code: O2	2. Pollutant(s):
3. CMS Requirement: [X] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Lear Siegler Model Number: RM41 Serial Number:	
5. Installation Date: 17 Sep 1982	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): O2 required pursuant to 40 CFR 60.45	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[x] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[x] C	[ ] E	[ ] Unknown
	SO_2	[x] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[x] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			
	PSD Review under PSD-FL-008.			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: LMC-EU3-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: LMC-EU3-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: LMC-EU3-L3	
	[ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: LMC-EU3-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 1 Aug 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: LMC-EU3-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[X] Attached, Document ID: LMC-EU3-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[X] Attached, Document ID: LMC-EU3-L12 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: LMC-EU1-L14

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[ ] Not Applicable

ATTACHMENT LMC-EU3-D

EMISSIONS UNIT REGULATIONS

ATTACHMENT LMC-EU3-D

Applicable Requirements Listing - Power Plants Acid Rain Units

EMISSION UNIT ID: EU3 - McIntosh Plant - FFFSG Unit 3

FDEP Rules:

Air Pollution Control-General Provisions:

62-204.800(7)(b)1. (State Only)	- NSPS Subpart D
62-204.800(7)(c) (State Only)	- NSPS authority
62-204.800(7)(d)(State Only)	- NSPS General Provisions
62-204.800(12) (State Only)	- Acid Rain Program
62-204.800(13) (State Only)	- Allowances
62-204.800(14) (State Only)	- Acid Rain Program Monitoring
62-204.800(15) (State Only)	- NOx
62-204.800(16) (State Only)	- Excess Emissions (Potentially applicable over term of permit)

Stationary Sources-General:

62-210.650	- Circumvention; EUs with control device
62-210.700(1)	- Excess Emissions;
62-210.700(4)	- Excess Emissions; poor maintenance
62-210.700(6)	- Excess Emissions; notification

Acid Rain:

62-214.300	- All Acid Rain Units (Applicability)
62-214.320(1)(a),(2)	- All Acid Rain Units (Application Shield)
62-214.330(1)(a)1.	- Compliance Options (if 214.430)
62-214.340	- Exemptions (new units, retired units)
62-214.350(2);(3);(6)	- All Acid Rain Units (Certification)
62-214.370	- All Acid Rain Units (Revisions; correction; potentially applicable if a need arises)
62-214.430	- All Acid Rain Units (Compliance Options-if required)

Stationary Sources-Emission Standards:

62-296.405(2)	- New Sources

Stationary Sources-Emission Monitoring (where stack test is required):

62-297.310(1)	- All Units (Test Runs-Mass Emission)
62-297.310(2)(b)	- All Units (Operating Rate; other than CTs;no CT)
62-297.310(3)	- All Units (Calculation of Emission)
62-297.310(4)(a)1.	- All Units (Applicable Test Procedures;Sampling time)
62-297.310(4)(b)	- All Units (Sample Volume)

62-297.310(4)(c)	- All Units (Required Flow Rate Range-PM/H2SO4/F)
62-297.310(4)(d)	- All Units (Calibration)
62-297.310(4)(e)	- All Units (EPA Method 5-only)
62-297.310(5)	- All Units (Determination of Process Variables)
62-297.310(6)(a)	- All Units (Permanent Test Facilities-general)
62-297.310(6)(c)	- All Units (Sampling Ports)
62-297.310(6)(d)	- All Units (Work Platforms)
62-297.310(6)(e)	- All Units (Access)
62-297.310(6)(f)	- All Units (Electrical Power)
62-297.310(6)(g)	- All Units (Equipment Support)
62-297.310(7)(a)1.	- Applies mainly to CTs/Diesels
62-297.310(7)(a)2.	- FFSG excess emissions
62-297.310(7)(a)3.	- Permit Renewal Test Required
62-297.310(7)(a)4.a;	- Annual Test
62-297.310(7)(a)5.	- PM exemption if $<$400 hrs/yr
62-297.310(7)(a)6.	- PM FFSG semi annual test required if $>$200 hrs/yr
62-297.310(7)(a)7.	- PM quarterly monitoring if $>$100 hrs/yr
62-297.310(7)(a)9.	- FDEP Notification - 15 days
62-297.310(7)(c)	- Waiver of Compliance Tests (Fuel Sampling)
62-297.310(8)	- Test Reports

Federal Rules:

NSPS Subpart D:

40 CFR 60.42(a)(1)	- PM (0.1 lb/mmBtu)
40 CFR 60.42(a)(2)	- VE (20%;1-6min 27%)
40 CFR 60.43(a)(1)	- SO2; liquid fuel (0.8 lb/mmBtu)
40 CFR 60.43(a)(2)	- SO2; solid fuel (1.2 lb/mmBtu)
40 CFR 60.43(b)	- SO2; Simultaneous firing
40 CFR 60.43(c)	- SO2; compliance; allows gas co-firing
40 CFR 60.44(a)(1)	- NOx; gas (0.2 lb/mmBtu)
40 CFR 60.44(a)(2)	- NOx; oil (0.3 lb/mmBtu)
40 CFR 60.44(a)(3)	- NOx; coal (0.7 lb/mmBtu)
40 CFR 60.44(b)	- NOx; Simultaneous firing
40 CFR 60.45 (a)	- Monitoring; Requires CEMS; VE, SO2 & NOx
40 CFR 60.45(b)(3)	- Exempts CEMS when tests 70% of standard
40 CFR 60.45(b)(4)	- If no CEMS than no O2 or CO2 required
40 CFR 60.45(c)	- Performance Requirements for CEMS
40 CFR 60.45(e)	- Conversion Procedures for CEMS
40 CFR 60.45(g)(1)	- Excess Emission Reports-Opacity
40 CFR 60.45(g)(2)	- Excess Emission Reports-SO2
40 CFR 60.45(g)(3)	- Excess Emission Reports-NOx
40 CFR 60.46 (a)	- Test Methods for Performance tests

40 CFR 60.46 (b)	- Test Methods for PM, SO2 and NOx
40 CFR 60.46 (c)	- Fuel combinations

NSPS General Requirements:

40 CFR 60.7(a)(4)	- Notification and Recordkeeping (Physical/Operational Change)
40 CFR 60.7(b)	- Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(c)	- Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(d)	- Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(f)	- Notification and Recordkeeping (maintain records-2 yrs)
40 CFR 60.8(c)	- Performance Tests (representative conditions)
40 CFR 60.8(e)	- Provide Stack Sampling Facilities
40 CFR 60.8(f)	- Test Runs
40 CFR 60.11(a)	- Compliance (ref. S. 60.8 or Subpart; other than opacity)
40 CFR 60.11(b)	- Compliance (opacity determined EPA Method 9)
40 CFR 60.11(c)	- Compliance (opacity; excludes startup/shutdown/malfunction)
40 CFR 60.11(d)	- Compliance (maintain air pollution control equip.)
40 CFR 60.11(e)(2)	- Compliance (opacity; ref. S. 60.8)
40 CFR 60.12	- Circumvention
40 CFR 60.13(a)	- Monitoring (Appendix B; Appendix F)
40 CFR 60.13(c)	- Monitoring (Opacity COMS)
40 CFR 60.13(d)(1)	- Monitoring (CEMS; span, drift, etc.)
40 CFR 60.13(d)(2)	- Monitoring (COMS; span, system check)
40 CFR 60.13(e)	- Monitoring (frequency of operation)
40 CFR 60.13(f)	- Monitoring (frequency of operation)
40 CFR 60.13(h)	- Monitoring (COMS; data requirements)

Acid Rain-Permits:

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO2 Allowances-hold allowances
40 CFR 72.9(c)(2)	- SO2 Allowances-violation
40 CFR 72.9(c)(3)(iii)	- SO2 Allowances-Phase II Units (listed)
40 CFR 72.9(c)(4)	- SO2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	- SO2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(d)	- NOx Requirements
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; required

40 CFR 72.20(b)	- Designated Representative; legally binding
40 CFR 72.20(c)	- Designated Representative; certification requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing representatives; owners
40 CFR 72.24	- Certificate of representation
40 CFR 72.30(a)	- Requirements to Apply (operate)
40 CFR 72.30(b)(2)	- Requirements to Apply (Phase II-Complete)
40 CFR 72.30(c)	- Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	- Requirements to Apply (submittal requirements)
40 CFR 72.31	- Information Requirements; Acid Rain Applications
40 CFR 72.32	- Permit Application Shield
40 CFR 72.33(b)	- Dispatch System ID;unit/system ID
40 CFR 72.33(c)	- Dispatch System ID;ID requirements
40 CFR 72.33(d)	- Dispatch System ID;ID change
40 CFR 72.40(a)	- General; compliance plan
40 CFR 72.40(b)	- General; multi-unit compliance options
40 CFR 72.40(c)	- General; conditional approval
40 CFR 72.40(d)	- General; termination of compliance options
40 CFR 72.51	- Permit Shield
40 CFR 72.90	- Annual Compliance Certification
Allowances:	
40 CFR 73.33(a),(c)	- Authorized account representative
40 CFR 73.35(c)(1)	- Compliance: ID of allowances by serial number
Monitoring Part 75:	
40 CFR 75.4	- Compliance Dates;
40 CFR 75.5	- Prohibitions
40 CFR 75.10(a)(1)	- Primary Measurement; SO2;
40 CFR 75.10(a)(2)	- Primary Measurement; NOx;
40 CFR 75.10(a)(3)(i)	- Primary Measurement; CO2; monitor
40 CFR 75.10(a)(4)	- Primary Measurement; Opacity;
40 CFR 75.10(b)	- Primary Measurement; Performance Requirements
40 CFR 75.10(c)	- Primary Measurement; Heat Input; Appendix F
40 CFR 75.10(d)	- Primary Measurement; Hourly Operating ; Opacity; SO2
40 CFR 75.10(e)	- Primary Measurement; Optional Backup Monitor
40 CFR 75.10(f)	- Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	- Primary Measurement; Minimum Recording
40 CFR 75.11(a)	- SO2 Monitoring; Coal Units (Suspended 7/17/96 - 12/31/96)
40 CFR 75.11(e)	- SO2 Monitoring; Gaseous firing
40 CFR 75.11(g)	- SO2 Monitoring; Coal Units
40 CFR 75.12(a)	- NOx Monitoring; Coal; Non-peaking oil/gas units

40 CFR 75.12(b)	- NOx Monitoring; Determination of NOx emission rate; Appendix F
40 CFR 75.13(a)	- CO2 Monitoring; Continuous monitor
40 CFR 75.13(b)	- CO2 Monitoring; Appendix G
40 CFR 75.14(a)	- Opacity Monitoring; Coal and oil units
40 CFR 75.14(b)	- Opacity Monitoring; FGD Units; exemption
40 CFR 75.14(d)	- Opacity Monitoring; Diesel/dual fuel units; exemption
40 CFR 75.20(a)	- Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	- Recertification Procedures (if recertification necessary)
40 CFR 75.20(c)	- Certification Procedures (if recertification necessary)
40 CFR 75.20(d)	- Recertification Backup/portable monitor
40 CFR 75.20(f)	- Alternate Monitoring system
40 CFR 75.20(g)	- Exceptions to CEMS; oil/gas/diesel; Appendix D & E
40 CFR 75.21(a)	- QA/QC; CEMS; Appendix B (Suspended 7/17/95-12/31/96)
40 CFR 75.21(b)	- QA/QC; Opacity; Part 51 Appendix M
40 CFR 75.21(c)	- QA/QC; Calibration Gases
40 CFR 75.21(d)	- QA/QC; Notification of RATA
40 CFR 75.21(e)	- QA/QC; Audits
40 CFR 75.21(f)	- QA/QC; CEMS (Effective 7/17/96-12/31/96)
40 CFR 75.22	- Reference Methods
40 CFR 75.24	- Out-of-Control Periods; CEMS
40 CFR 75.30(a)(1)	- General Missing Data Procedures; SO2
40 CFR 75.30(a)(2)	- General Missing Data Procedures; flow
40 CFR 75.30(a)(3)	- General Missing Data Procedures; NOx
40 CFR 75.30(a)(4)	- General Missing Data Procedures; SO2
40 CFR 75.30(b)	- General Missing Data Procedures; certified backup monitor
40 CFR 75.30(c)	- General Missing Data Procedures; certified backup monitor
40 CFR 75.30(d)	- General Missing Data Procedures; SO2 (optional before 1/1/97)
40 CFR 75.30(e)	- General Missing Data Procedures; bypass/multiple stacks
40 CFR 75.31	- Initial Missing Data Procedures (new/re-certified CMS)
40 CFR 75.32	- Monitoring Data Availability for Missing Data
40 CFR 75.33	- Standard Missing Data Procedures
40 CFR 75.34	- Units with add-on controls
40 CFR 75.35	- Missing Data for CO2
40 CFR 75.36	- Missing Data for Heat Input
40 CFR 75.40	- Alternate Monitoring Systems-General
40 CFR 75.41	- Alternate Monitoring Systems-Precision Criteria
40 CFR 75.42	- Alternate Monitoring Systems-Reliability Criteria
40 CFR 75.43	- Alternate Monitoring Systems-Accessability Criteria
40 CFR 75.44	- Alternate Monitoring Systems-Timeliness Criteria

40 CFR 75.45	- Alternate Monitoring Systems-Daily QA
40 CFR 75.46	- Alternate Monitoring Systems-Missing data
40 CFR 75.47	- Alternate Monitoring Systems-Criteria for Class
40 CFR 75.48	- Alternate Monitoring Systems-Petition
40 CFR 75.53	- Monitoring Plan ; revisions
40 CFR 75.54(a)	- Recordkeeping-general
40 CFR 75.54(b)	- Recordkeeping-operating parameter
40 CFR 75.54(c)	- Recordkeeping-SO2
40 CFR 75.54(d)	- Recordkeeping-NOx
40 CFR 75.54(e)	- Recordkeeping-CO2
40 CFR 75.54(f)	- Recordkeeping-Opacity
40 CFR 75.55(c)	- General Recordkeeping (Specific Situations)
40 CFR 75.55(e)	- General Recordkeeping (Specific Situations)
40 CFR 75.56	- Certification; QA/QC Provisions
40 CFR 75.60	- Reporting Requirements-General
40 CFR 75.61	- Reporting Requirements-Notification cert/recertification
40 CFR 75.62	- Reporting Requirements-Monitoring Plan
40 CFR 75.63	- Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	- Reporting Requirements-Quarterly reports; submission
40 CFR 75.64(b)	- Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	- Rep. Req.; Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Rep. Req.; Quarterly reports; Electronic format
40 CFR 75.65	- Opacity Reports
40 CFR 75.66	- Petitions to the Administrator (if required)
Appendix A-1.	- Installation and Measurement Locations
Appendix A-2.	- Equipment Specifications
Appendix A-3.	- Performance Specifications
Appendix A-4.	- Data Handling and Acquisition Systems
Appendix A-5.	- Calibration Gases
Appendix A-6.	- Certification Tests and Procedures
Appendix A-7.	- Calculations
Appendix B	- QA/QC Procedures
Appendix C-1.	- Missing Data; SO2/NOx for controlled sources
Appendix C-2.	- Missing Data; Load-Based Procedure; NOx & flow
Appendix D	- Optional SO2; Oil-/gas-fired units
Appendix F	- Conversion Procedures
Appendix H	- Traceability Protocol

Acid Rain Program-NOx Emission Reduction (these are future requirements that may become applicable during the term of the Title V permit):

40 CFR 76.5(g)	- NOx emssion limitations; Group 1; Phase II; Jan.1, 2000
40 CFR 76.8	- Early Election; Group 1; Phase II (this is a elective regulation)

40 CFR 76.9(2)	- Permit Application/Compliance Plans; Phase II (1/1/98); Early Election (1/1/97)
40 CFR 76.10	- Alternative Emission Limitations (elective)
40 CFR 76.11	- Emission Averaging (elective)
40 CFR 76.13	- Compliance and Excess Emissions
40 CFR 76.14	- Monitoring Recordkeeping and Reporting

Acid Rain Program-Excess Emissions (these are future requirements that may overlap with the term of the Title V permit):

40 CFR 77.3	- Offset Plans (future)
40 CFR 77.5(b)	- Deductions of Allowances (future)
40 CFR 77.6	- Excess Emissions Penalties (SO2 and NOx;future)

ATTACHMENT LMC-EU3-F10

SEGMENT COMMENT

ATTACHMENT LMC-EU3-F10

SEGMENT COMMENTS

For Segment #1, Coal; the maximum hourly rates and percent sulfur will vary depending upon coal source but will not exceed 3.3 percent. Heat content is based on maximum hourly rate of tons per hour (TPH) and maximum heat input rating for unit of 3,640 MMBtu/hr.

For Segment #2, Coal and RDF (90/10 heat input basis); there is another SCC of 1-01-012-02. The maximum hourly rates and percent sulfur will vary depending upon mixture. Sulfur content assumption - coal and RDF blended to a sulfur content of 2.9 percent with coal at 3.3 percent sulfur and RDF at 0.1 percent sulfur. Maximum hourly rate calculated using tons/hour (TPH) 143.7 TPH coal and 40.4 TPH RDF. Heat content of mixture based on the maximum heat input rating for unit of 3,640 MMBtu/hr. Typical heat contents for coal and RDF are 24.6 and 9 MMBtu/ton, respectively.

For Segment #3 Heat content based on maximum hourly rate (1,000 gal) and maximum heat input rating for unit of 3,640 MMBtu/hr. Distillate oil (1-01-005-01) is used for unit startup and load stabilization (could be used as primary fuel-fired). Maximum sulfur based on firing oil without FGD System. Higher sulfur oil allowed with FGD.

For Segment #4, Oil and RDF (90/10 heat input basis); there is another SCC of 1-01-012-02. The maximum hourly rates and percent sulfur will vary depending upon mixture. Oil and RDF (40.4 tons/hour and 353,904 tons/year) blended to a sulfur content of 0.73 percent. Heat content of mixture based on the maximum heat input rating for unit of 3,640 MMBtu/hr. RDF has heat value of 9 MMBtu/ton. Higher sulfur oil is allowed if FGD is used to meet SO_2 limit.

For Segment #5, Coal and Petroleum coke (80/20 weight basis); the maximum hourly rates and percent sulfur will vary depending upon mixture. Coal and petroleum coke will be blended to a maximum sulfur content of 3.3 percent. Typical sulfur content of petroleum coke is 5 percent. Maximum hourly rate calculated using 122.1 TPH coal and 30.5 TPH petroleum coke. Heat content of mixture based on the maximum heat input rating for unit of 3,640 MMBtu/hr. Heat contents of coal and petroleum coke are 22.81 and 20.0 MMBtu/ton.

For Segment #6, Coal, Petroleum Coke and RDF (80/20 weight basis at 90% of heat input; RDF at 10% of heat input); the maximum hourly rates and percent sulfur will vary depending upon mixture. Coal, RDF, and petroleum coke will be blended to a maximum sulfur content of 3.3 percent. Maximum hourly rate calculated using 100.9 TPH coal, 40.4 TPH RDF, and 27.5 TPH petroleum coke. Heat content of mixture based on the maximum heat input rating for unit of 3,640 MMBtu/hr.

ATTACHMENT LMC-EU3-H6

POLLUTANT ALLOWABLE EMISSIONS COMMENT

ATTACHMENT LMC-EU3-H6

POLLUTANT ALLOWABLE EMISSIONS COMMENT

Coal and petroleum coke: the allowable emission limit is based on FDEP Rule 62-204.800(7)(b)1.; 40 CFR 60, Subpart D, Section 60.43(a)(2) for coal firing; PSD-FL-008(B). Maximum of 1.2 lb/MMBtu and 90 percent reduction or when emissions less than 0.75 lb/MMBtu then 65 percent reduction allowed. Compliance with SO_2 limits and percent reduction determined on 30-day rolling average, coal and coal/RDF. Refer to Attachment LMC-EU3-L12 (Identification of Additional Applicable Requirements) for more information.

ATTACHMENT LMC-EU3-H9

POLLUTANT POTENTIAL/ESTIMATED EMISSIONS COMMENT

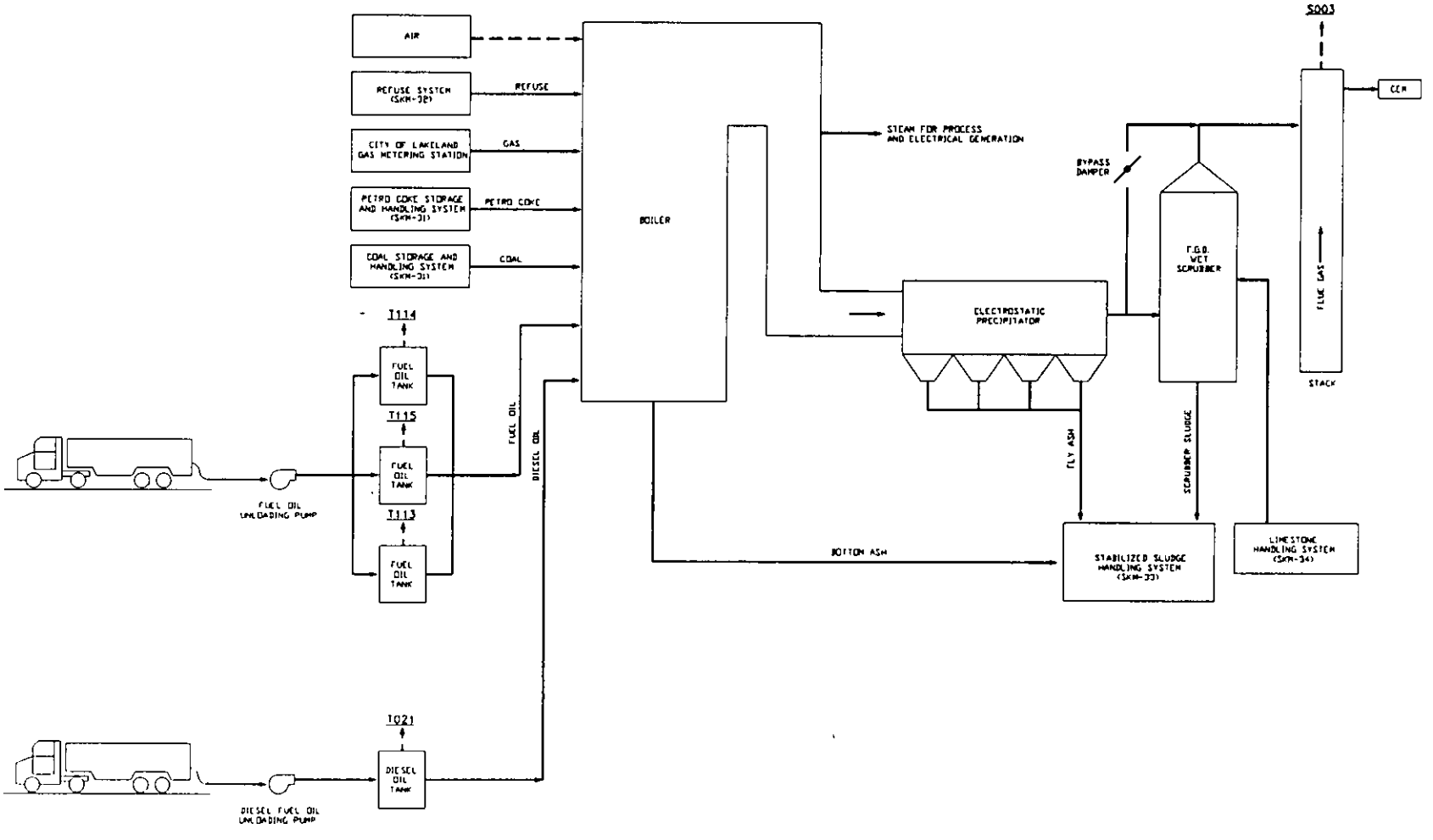
ATTACHMENT LMC-EU3-H9

POLLUTANT POTENTIAL/ESTIMATED EMISSIONS COMMENT

PSD permit (PSD-FL-008) has emission limitations of 0.044 lb/MMBtu for coal; 0.05 lb/MMBtu for coal/refuse (RDF); 0.07 lb/MMBtu for oil, and 0.075 lb/MMBtu for oil/refuse (RDF). The maximum potential emissions are based on oil/RDF firing.

ATTACHMENT LMC-EU3-L1

PROCESS FLOW DIAGRAM



NO	BY	DATE	APPR.	REVISION
3	MG	5-28-96	HP	ISSUED FOR TITLE V
2	MG	5-15-96	HP	CHANGE TITLE & ADDED LIMESTONE
1	MG	8-9-95		DELETED T116

LAKELAND ELECTRIC & WATER

DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
UNIT NO. 3
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
APPR. BY:
DATE 9-19-94

CAD | SCALE NONE
PROJ. NO AIR PERMIT
DWG NO. LMC-EU3-L1/SKM-27 | REV. 3

SIZE B

ATTACHMENT LMC-EU3-L2

FUEL ANALYSIS OR SPECIFICATION

Attachment LMC-EU3-L2

Fuel Analysis

Coal

Parameter	Typical Value	Maximum[a], Minimum[b], or Design[c] Value
heat content (Btu/lb)	13,000	11,200[b] - 12,174[c]
% sulfur	1.0 - 1.5	2.5[c] - 3.3[a]
% nitrogen	1.3 - 1.7	1.54%[c] (dry)
% ash	5 - 13	16.3[c]

Attachment LMC-EU3-L2

Fuel Analysis

RDF

Parameter	Typical Value
heat content (Btu/lb)	4,300 - 6,340
% moisture	5 - 49
% ash	3 - 35
% sulfur	0.1

From laboratory analysis

Attachment LMC-EU3-L2

Fuel Analysis

Petroleum Coke

Parameter	Typical Value
heat content (Btu/lb)	14,000
% sulfur	5
% ash	0.35

From laboratory analysis

Attachment LMC-EU3-L2

Fuel Analysis

Natural Gas Analysis

Parameter	Typical Value	Max Value
Relative density	0.58 (compared to air)	
heat content	950 - 1124 Btu/cu ft. (HHV)	
% sulfur	0.43 grains/CCF [1]	1 grain/100
CF		
% nitrogen	0.8% by volume	
% ash	negligible	

Note: The values listed are "typical" values based upon information supplied by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data from laboratory analysis

Attachment LMC-EU3-L2

Fuel Analysis

No. 6 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	8[1]	-
Relative density	8.2 lb/gal [2]	
Heat content	18,300 Btu / lb (HHV)	
% sulfur	0.7 [2]	0.725 [3]
% nitrogen	0.25 - 0.50	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from the fuel procurement specification

[2] Data from laboratory analysis

[3] Data from current air permit based on 0.8 lb/MMBtu for oil firing only; when using FGD system, or when co-firing with gas, sulfur content can be as high as 2.5 percent.

Attachment LMC-EU3-L2

Fuel Analysis

No. 2 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	30[1]	-
Relative density	6.92 lb/gal [2]	
Heat content	18,400 Btu / lb (LHV)	
% sulfur	<0.5 [2]	0.5
% nitrogen	0.025 - 0.030	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from fuel procurement specification

[2] Data from laboratory analysis

ATTACHMENT LMC-EU3-L3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT LMC-EU3-L3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

McIntosh Unit 3 has air pollution control equipment for nitrogen oxides (NOx), particulate matter (PM) and sulfur dioxide (SO2). The information that follows present a description of the equipment controlling these pollutants.

NITROGEN OXIDES

NOx is controlled using boiler design and dual register burners to achieve an emission rate of no greater than 0.7 lb/mmBtu. The burner zone has a heat release rate of 370 kBtu/hr-ft2 which reduces the NOx emissions to 0.7 lb/mmBtu or less. The boiler and burner was manufactured by Babcock and Wilcox (B&W).

PARTICULATE MATTER

The PM from the combustion of fuels in Unit 3 is controlled by an electro-static precipitator (ESP). The ESP has the following design parameters:

Plate Height - 47.6 ft.
Number of Casings - 2
Field Depth - 16.4 ft
Number of Lanes per Casing - 50
Number of Fields/Casing - 5
Effective Area/Plate - 1,559.3 ft2
Total Effective Area - 779,700 ft2

SULFUR DIOXIDE

SO2 is controlled using a wet limestone scrubbing system. The scrubber is of a tray tower type consisting of two absorber modules. Each module provides a 55 percent capacity of total unit output. The components of the scrubbing system are listed below:

Quencher - Flue gases exiting the ESP inters the quenchers for each absorber which condition the flue gas. Each absorber has a venturi-type quencher with a throat of 27 feet long and 5 feet wide. The quench water is recirculated from the quencher sump.

Absorber Tray Tower - After adiabatic saturation in the quencher, the gases pass up through the tray tower absorber for SO2 removal. The limestone slurry is introduced at the top of the tray absorber from a series of spray headers. The flow is countercurrent through the 36 foot wide (diameter) absorber.

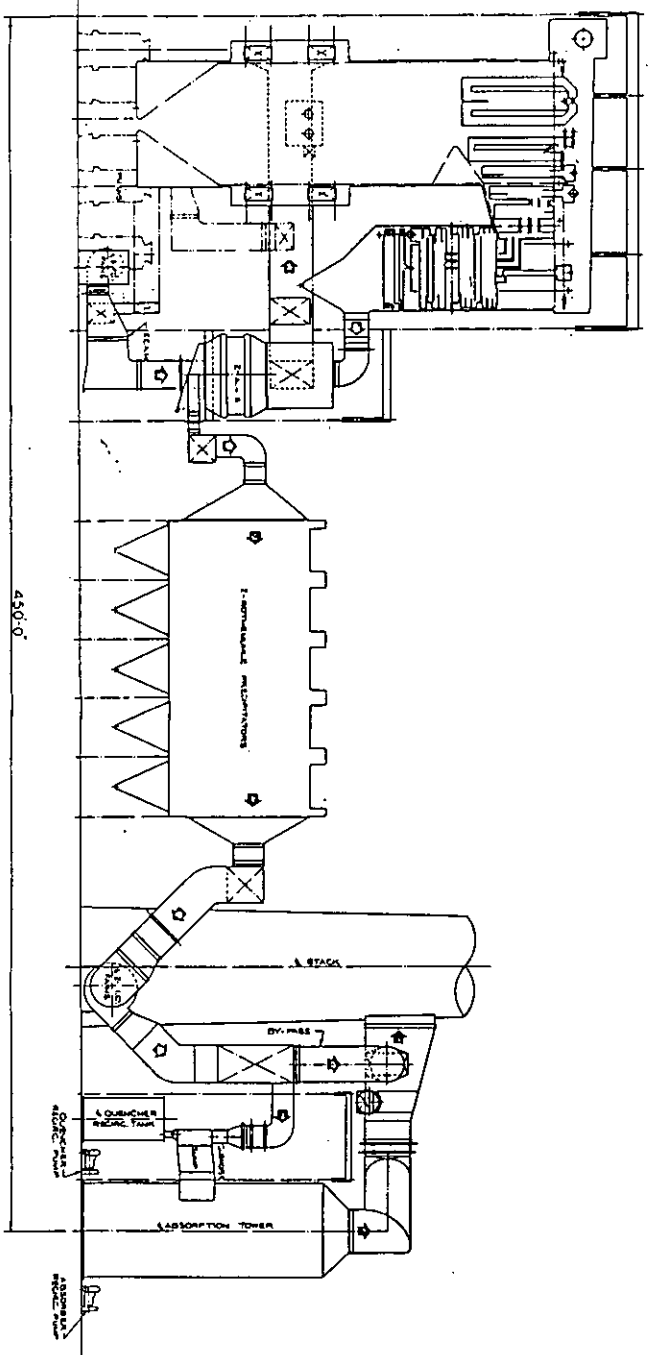
Demister - Before exiting the absorber, aerosols in the flue gas are removed in a z-shaped demister made from reinforced fiberglass material.

Associated Equipment - Supporting the operation of the scrubber are the following equipment: absorber recirculation tank, quencher recirculation tank, and quencher and absorber recirculation pumps. The scrubber is equipped with a hot air reheat system (steam coil) and a bypass flue. The latter bypasses flue gases around the absorber system and mixes with air exiting the absorber tower. This increases the exit gas temperatures. A continuous emission monitoring system is installed to assure compliance with the SO2 emission limit.

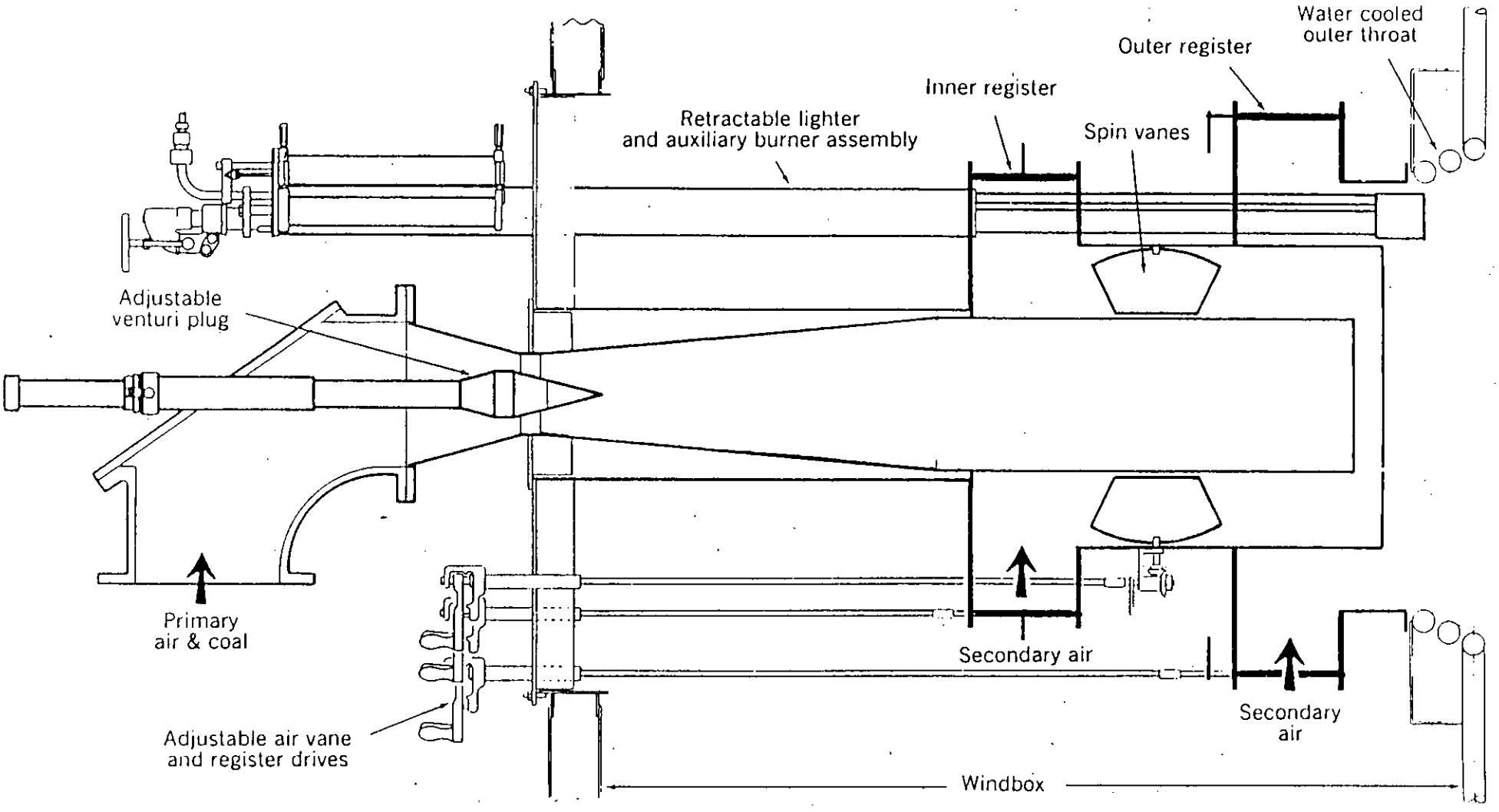
Additional equipment/processes supporting the scrubber system include limestone slurry preparation system, slurry storage and transfer system, and dewatering system. The process flow diagram in Attachment LMC-EU6-L1 provides information on the input and output processes from the scrubber.

The scrubber is of a Babcock & Wilcox design.

P12-4640 - 710

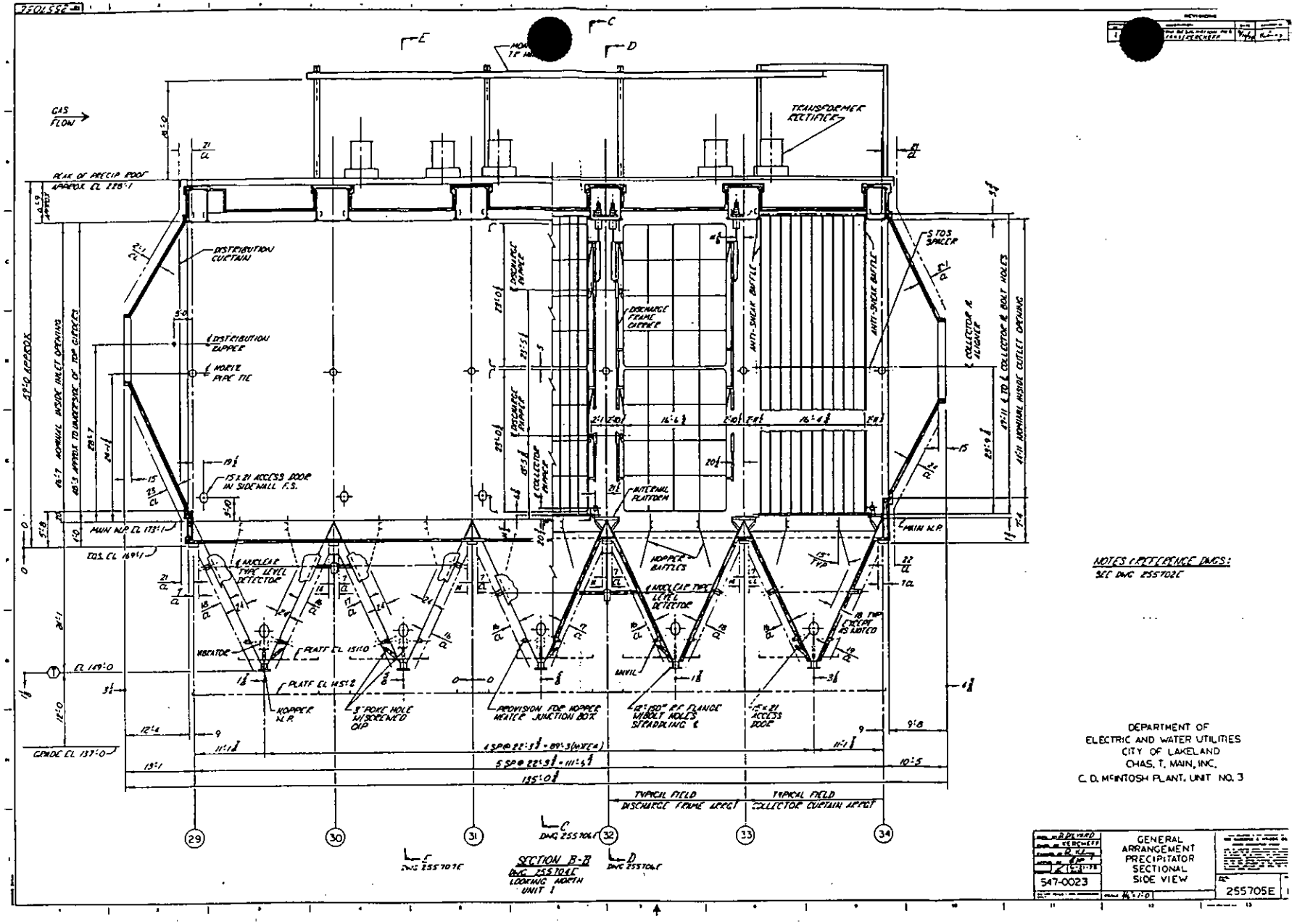


103 CITY OF LAKELAND THE BABCOCK & WILCOX COMPANY P12-4640 - 710	DEPARTMENT OF ELECTRIC AND WATER UTILITIES CITY OF LAKELAND CHAS. T. MAIN, INC. C. D. McINTOSH PLANT, UNIT NO. 3	Babcock & Wilcox POWER GENERATION



Dual register burner

Figure 1



NOTES (REFERENCE DWGS:
SEE DWG 255702E

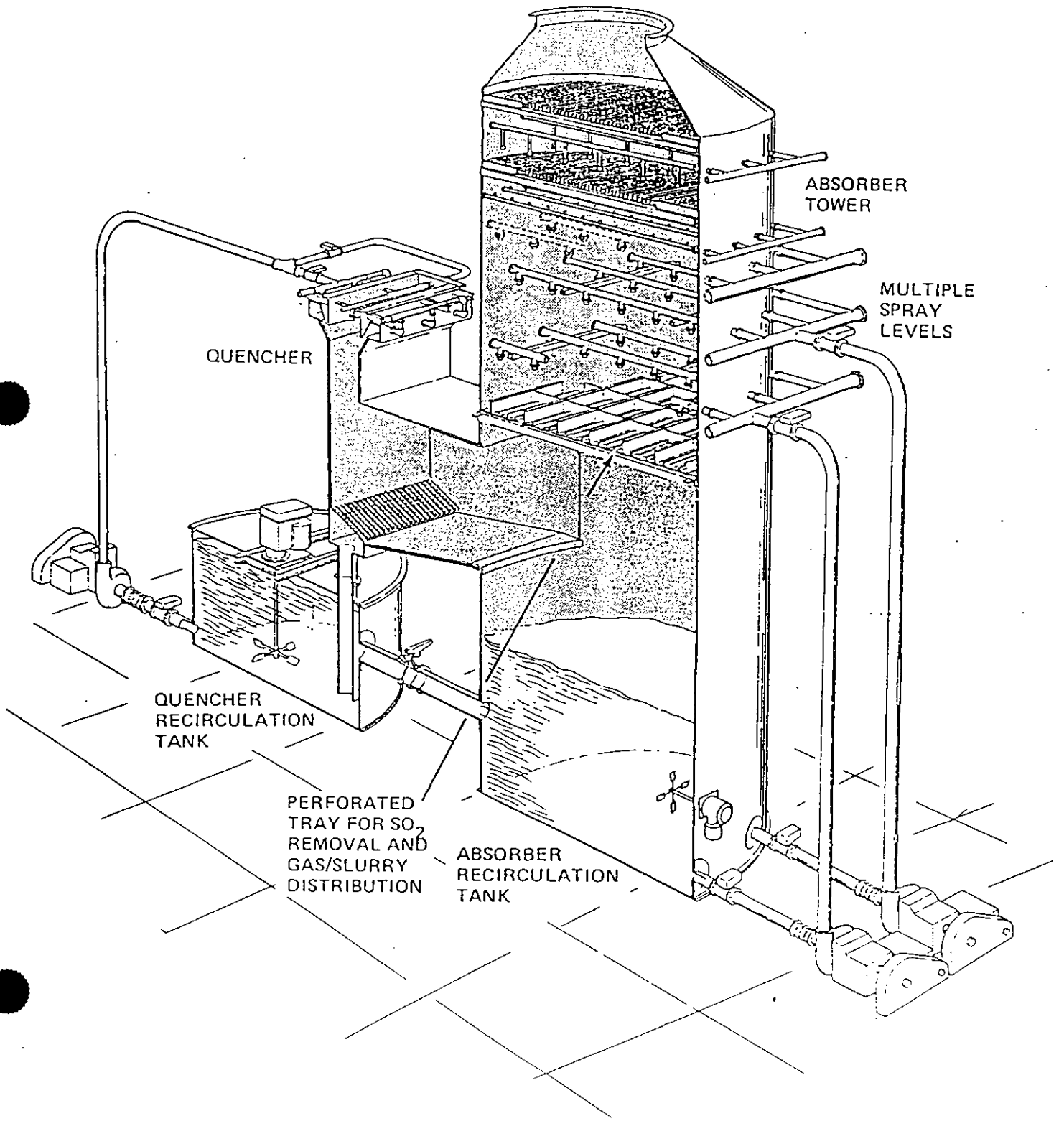
DEPARTMENT OF
ELECTRIC AND WATER UTILITIES
CITY OF LAKELAND
CHAS. T. MAIN, INC.
C. D. McINTOSH PLANT, UNIT NO. 3

GENERAL ARRANGEMENT PRECIPITATOR SECTIONAL SIDE VIEW

547-0023

255705E

SULFUR DIOXIDE ABSORBER TRAY TOWER MODULE



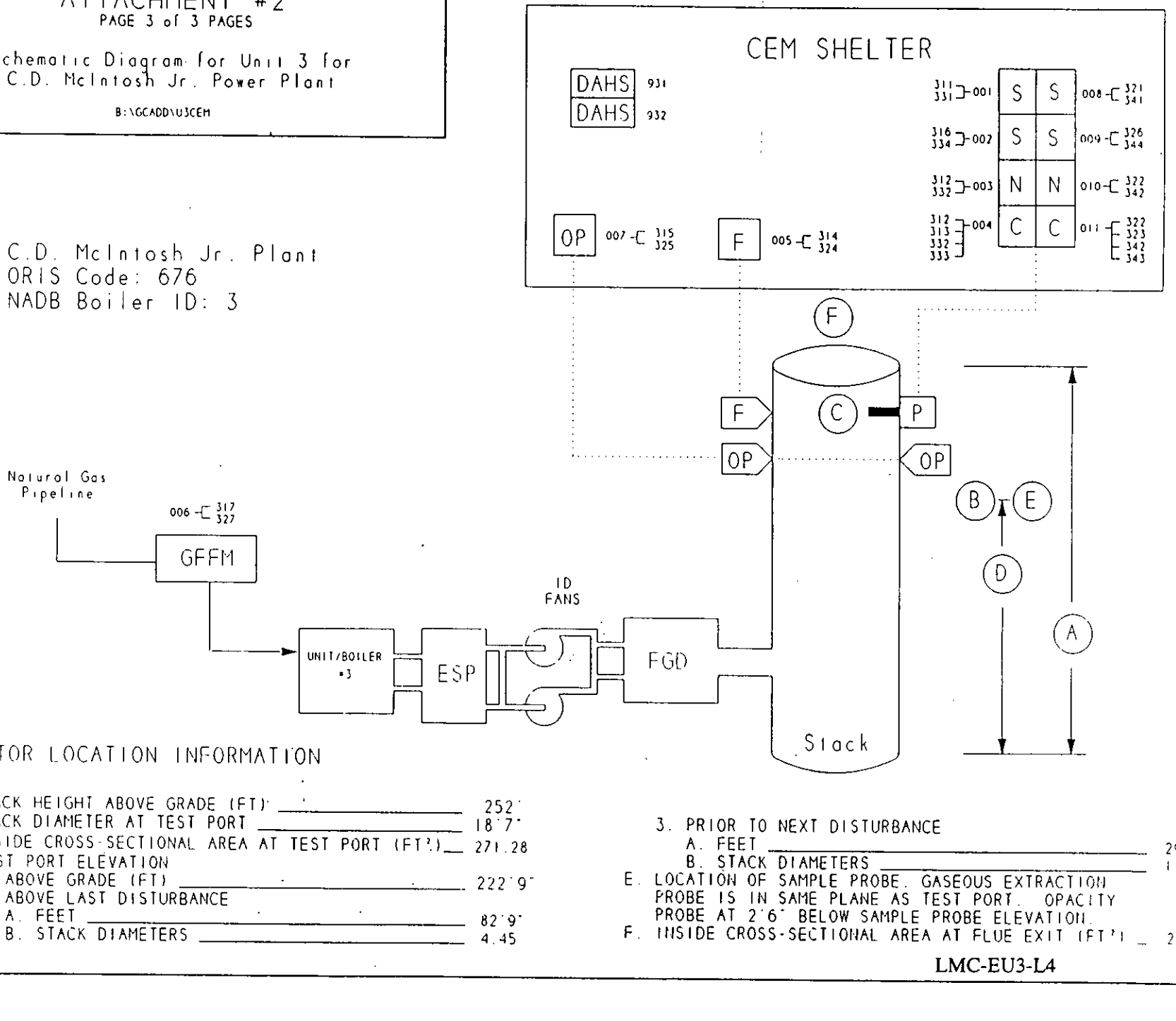
ATTACHMENT LMC-EU3-L4

DESCRIPTION OF STACK SAMPLING FACILITIES

ATTACHMENT #2
PAGE 3 of 3 PAGES

Schematic Diagram for Unit 3 for
C.D. McIntosh Jr. Power Plant

B:\GCADD\U3CEM



MONITOR LOCATION INFORMATION

A. STACK HEIGHT ABOVE GRADE (FT) ____ 252'
B. STACK DIAMETER AT TEST PORT ____ 18'7"
C. INSIDE CROSS-SECTIONAL AREA AT TEST PORT (FT²) ____ 271.28
D. TEST PORT ELEVATION
   1. ABOVE GRADE (FT) ____ 222'9"
   2. ABOVE LAST DISTURBANCE
      A. FEET ____ 82'9"
      B. STACK DIAMETERS ____ 4.45
   3. PRIOR TO NEXT DISTURBANCE
      A. FEET ____ 29'3"
      B. STACK DIAMETERS ____ 1.57
E. LOCATION OF SAMPLE PROBE. GASEOUS EXTRACTION PROBE IS IN SAME PLANE AS TEST PORT. OPACITY PROBE AT 2'6" BELOW SAMPLE PROBE ELEVATION.
F. INSIDE CROSS-SECTIONAL AREA AT FLUE EXIT (FT²) ____ 254.47

LMC-EU3-L4

ATTACHMENT LMC-EU3-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT LMC-EU3-L6

PROCEDURES FOR STARTUP AND SHUTDOWN MINIMIZING EXCESS EMISSIONS

Startup of the fossil-fuel boilers begins when fuel (No. 2 fuel oil, natural gas or propane) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable and above 10-15 percent load.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased to below 10 percent of maximum and continues until the final burner gun is removed from service.

Emissions may be detected during all modes of boiler operation by various continuous emissions monitors. Continuous monitors are currently in place for NO_x, CO_2, SO_2, flow and opacity. Audible and visual alarms are activated whenever the permitted value for opacity is approached.

Countermeasures which may be taken in the event of excess emissions include, but are not limited to:

- burner elevation loading
- proper excess air adjustments
- recognizing and removal of faulty burners
- fuel oil temperature adjustments
- proper and timely operation of boiler cleaning devices
- removal of the unit from system-dispatch mode (load control)
- reduction of unit megawatt load
- stopping and restarting of boiler cleaning devices
- lowering load ramp rate
- pressure rate changes
- placing boiler controls on manual
- adjusting burner dampers to increase windbox/furnace air pressure

Knowledge of the appropriate countermeasures to take when excess emissions occur is a part of the routine operator training for those who operate the boilers. Topics include current permit

maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, and fuels and combustion training.

ATTACHMENT LMC-EU3-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT LMC-EU3-L10
ALTERNATIVE METHODS OF OPERATION

The unit can be fired with multiple fuels up to 3,640 MMBtu/hour. The following fuels and fuel combinations may be burned:

1. Coal only with FGD
2. Low sulfur fuel oil only ($\leq$0.5 percent sulfur by weight) with or without FGD
3. Coal and up to 10 percent refuse (based on heat input) with FGD
4. Low sulfur fuel oil and up to 10 percent refuse (based on heat input) with or without FGD
5. Coal and up to 20 percent petroleum coke (based on weight) with FGD
6. Coal and up to 20 percent petroleum coke (based on weight) and 10 percent refuse (based on heat input) with FGD
7. High sulfur fuel oil ($>$0.5 percent sulfur by weight) consistent with conditions 2.C. or 2.D. of PSD-FL-008(B); with or without FGD
8. Natural gas only, or in combination with any of the other fuels or fuel combinations listed above; with or without FGD

The FGD system can operate from 65 to 90 percent removal.

ATTACHMENT LMC-EU3-L12

IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

ATTACHMENT LMC-EU3-L12

REQUEST TO CHANGE CONDITIONS OF THE AIR CONSTRUCTION/PSD PERMIT THAT ARE OBSOLETE AND OUTDATED

This request is to exclude from the Title V permit, several conditions of the FDEP issued air construction permit (AC53-2244) that are obsolete and outdated. This request is made pursuant to FDEP's Guidance on Implementation of Existing Permit Conditions Into Title V Permits (DARM-PER/V-14; February 8, 1996).

The FDEP issued on December 11,1995, an amendment to the PSD permit issued by the Environmental Protection Agency (EPA) on December 28, 1978. The issuance of this amendment revised and/or replaced many of the conditions of the original permit. Conditions 1.A., 2.A through D., and 6 replace the original PSD permit conditions. Of the remaining conditions in the PSD permit issued by EPA, the following are outdated or obsolete conditions that should not be included in the Title V permit.

Condition 5.A.- this is an initial compliance condition and is outdated.

Condition 5.B. - this condition is outdated, since 40 CFR Part 60 Subpart D allows 7, 7A, 7C, 7D, and 7E for determining compliance with NOx.

Condition 5.C. and D. - these conditions are outdated, since FDEP now has delegated authority for specifying conditions for compliance tests including notification.

Condition 5.E. and F. - these conditions are redundant and less specific than the Department's and EPA's rules on testing and are therefore outdated.

On February 14, 1996, the FDEP issued a modification to the Site Certification for McIntosh Unit 3 under 403.500 Florida Statutes. Prior to the issuance of Title V permits for air pollution, the Site Certification was the sole license by the State of Florida specifying conditions for the construction and operation of power plants. As a result,

Unit 3 did not receive a construction permit from FDEP under a federally approved construction permit program. The modifications to the Specific Conditions of Certification made in February are consistent with those made to the PSD permit. Attached is a copy of the relevant portions of the original and the modified Conditions of Certification for Unit 3 dealing with air pollution.

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

December 11, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Farzie Shelton, Ch.E.
Environmental Coordinator
City of Lakeland
Department of Water and Electric Utilities
501 East Lemon Street
Lakeland, Florida 33801-5050

Dear Ms. Shelton:

Re: City of Lakeland, C.D. McIntosh Unit No. 3
Amendment of Final Determination - PSD-FL-008(B)

The Department hereby amends the Conditions of Approval related to sulfur dioxide (SO_2) emissions and fuel use in the subject Final Determination (dated December 27, 1978) pursuant to 40 CFR 52.21 - Prevention of Significant Deterioration (PSD Permit). The PSD Permit, previously amended on September 5, 1995, is amended as follows:

Condition 1.A.

FROM:

Particulate matter emitted into the atmosphere from the boiler shall not exceed:

Mode of Firing	lb/10^6 Btu Heat Input
Coal	0.044
Coal/Refuse	0.050
Oil	0.070
Oil/Refuse	0.075

TO:

Particulate matter emitted into the atmosphere from the boiler shall not exceed:

Mode of Firing	lb/10^6 Btu Heat Input
Coal	0.044
Coal/Petcoke	0.044
Coal/Refuse	0.050
Coal/Petcoke/Refuse	0.050
Oil	0.070
Oil/Refuse	0.075

Condition 2.A.

FROM:

Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 1.2 pound per million Btu heat input.

TO:

Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 1.2 pound per million Btu heat input in accordance with 40 CFR 60 Subpart D-Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971.

Condition 2.B.

FROM:

A flue gas desulfurization system will be installed to treat exhaust gases and will operate such that whenever coal is burned, sulfur dioxide in gases discharged to the atmosphere from the boiler shall not exceed 1.2 pounds per million Btu heat input and 10 percent of the potential combustion concentration (90 percent reduction), or 35 percent of the potential combustion concentration (65 percent reduction), when emissions are less than 0.75 pounds per million Btu heat input. Compliance with the sulfur dioxide emission limitation and percent reduction requirement shall be determined on a 30-day rolling average.

TO:

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

Condition 2.C.

FROM:

The burning of oil or a combination of oil and municipal refuse as an emergency fuel without the use of the SO_2 scrubber will be allowed only when the flue gas desulfurization system malfunctions to the extent that the burning of coal would cause emission limitations to be exceeded. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu under this condition.

TO:

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

Condition 2.D.

FROM:

During malfunctions of equipment which cause an interruption of the coal feed to the boiler, the burning of oil or a combination of oil and municipal refuse will be allowed only if all flue gases are fully scrubbed by the SO_2 scrubber. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu under this condition.

TO:

During malfunctions of equipment which cause an interruption of the coal feed to the boiler, the burning of high sulfur oil (greater than 0.5 percent sulfur by weight) or a combination of high sulfur oil and municipal refuse will be allowed only if all flue gases are fully scrubbed by the SO_2 scrubber. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu under this condition.

Condition 2.E. (new)

Continuous burning of natural gas, low sulfur fuel oil (less than or equal to 0.5 percent sulfur by weight), or combinations of these two fuels with or without the use of the SO_2 scrubber will be allowed.

Condition 6. Continuous Monitoring Requirements

FROM:

Continuous monitors shall be installed and operated in accordance with 40 CFR 60.45 and 60.13. In addition, an ASTM-certified automatic coal sampler shall be installed which produces a representative daily sample for analysis of sulfur, moisture, heating value and ash. The coal analysis data shall be used in conjunction with emission factors and the continuous monitoring data to calculate SO_2 reduction.

TO:

Continuous monitors shall be installed and operated in accordance with 40 CFR 60.45 and 60.13. In addition, an ASTM-certified automatic solid fossil fuel sampler shall be installed which produces a representative daily sample for analysis of sulfur, moisture, heating value and ash. The solid fossil fuel analysis data shall be used in conjunction with emission factors and the continuous monitoring data to calculate SO_2 reduction.

Condition 8 (new)

The following fuels may be burned:

Coal only
Low sulfur fuel oil only (≤ 0.5 percent sulfur by weight)
Coal and up to 10 percent refuse (based on heat input)
Low sulfur fuel oil and up to 10 percent refuse (based on heat input)
Coal and up to 20 percent petroleum coke (based on weight)
Coal and up to 20 petroleum coke (based on weight) and 10 percent refuse (based on heat input)
High sulfur fuel oil (> 0.5 percent sulfur by weight) consistent with Conditions 2.C. or 2.D.
Natural gas only, or in combination with any of the other fuels or fuel combinations listed above

Condition 9 (new)

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

A copy of this amendment letter shall be attached to and shall become a part of Permit PSD-FL-008.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes, Director
Division Air Resources Management

CERTIFICATE OF SERVICE

This is to certify that this **PERMIT AMENDMENT** and all copies were mailed to the listed persons before the close of business on 12-11-95.

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Chapter 120.52(9), Florida Statutes, with the designated Deputy Clerk, receipt of which is hereby acknowledged.

Kym Jobe 12-11-95
Clerk Date

cc: J. Harper, EPA
J. Bunyak, NPS
B. Oven, DEP
B. Thomas, SWD
R. Harwood, PCESD
K. Kosky, KBN
A. Morrison, HGSS

PSD-FL-0008
McINTOSH #3
LAKELAND

Final Determination

Review of a Proposed Air Pollution Source Pursuant to Environmental Protection Agency Rules for the Prevention of Significant Deterioration (PSD)

40 CFR 52.21

McIntosh Unit 3

City of Lakeland, Florida

Roger O. Pfaff

U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30308

December 27, 1978

On November 26, 1978, EPA issued a Preliminary Determination that McIntosh Unit 3 could be approved with conditions under EPA Regulations for Prevention of Significant Deterioration, 40 CFR 52.21. During the 30 day public comment period, ending December 26, 1978, only the City of Lakeland commented on the determination. The City asked that a condition be added to the determination allowing the use of oil as a fuel during periods when the coal feed is lost due to equipment malfuncitons.

EPA agreed to allow this request, but only if the flue gases are scrubbed by the SO_2 scrubber. The final conditions are the same as those in the Preliminary Determination except for this extra condition. The full list of conditions of approval follows:

Conditions of Approval

1. For Particulate Emissions from the Boiler:

The source must meet an emission limit, as measured under part (5) as follows:

A. Particulate matter emitted to the atmosphere from the boiler shall not exceed:

Mode of Firing	lb/10^6 Btu Heat Input
Coal	0.044
Coal/Refuse	0.050
Oil	0.070
Oil/Refuse	0.075

2. For Sulfur Dioxide from the Boiler:

The source must meet an emission limit, as measured under part (5) as follows:

A. Sulfur dioxide emitted to the atmosphere from the boiler shall

not exceed 1.2 pound per million Btu heat input derived from solid fossil fuel.

B. A flue gas desulfurization system will be installed to treat all exhaust gases and will operate at a minimum SO_2 removal efficiency of 85 percent whenever coal is burned.

C. The burning of oil or a combination of oil and municipal refuse as an emergency fuel without the use of the SO_2 scrubber will be allowed only when the flue gas desulfurization system malfunctions to the extent that the burning of coal would cause emission limitations to be exceeded. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu under this condition.

D. During malfunctions of equipment which cause an interruption of the coal feed to the boiler, the burning of oil or a combination of oil and municipal refuse will be allowed only if all flue gases are fully scrubbed by the SO_2 scrubber. Sulfur dioxide emitted to the atmosphere from the boiler

shall not exceed 0.3 pound per million Btu under this condition.

3. For Particulate Emissions from Materials Handling Operations:

The applicant shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, coal transfer and loading system, limestone handling or storage operation, or flyash handling or storage operation, gases which exhibit 20 percent opacity or greater.

4. For SO_x Emissions from the Boiler:

The source must meet an emission limit, as measured under part (5) as follows:

a. SO_x emitted to the atmosphere from the boiler shall not exceed 0.7 pound per million Btu heat input when firing coal or coal/refuse.

b. SO_x emitted to the atmosphere from the boiler shall not

exceed 0.3 pound per million Btu heat input when firing oil or oil/refuse.

5. Stack Testing:

a. Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial startup, the owner or operator shall conduct performance tests and furnish EPA a written report of the results of such performance tests. Performance tests shall be conducted for the 4 modes of boiler operation (i.e., coal, coal/refuse, oil, oil/refuse).

b. Performance tests shall be conducted and data reduced in accordance with methods and procedures specified by EPA. Reference Methods 1 through 5 as published in Appendix A of 40 CFR 60 will be used for particulate tests. Reference Method 6 will be used for SO_2 tests. Reference Method 7 will be used for NO_x tests.

c. Performance tests shall be conducted under such conditions as

EPA shall specify based on representative performance of the facility. The owner or operator shall make available to EPA such records as may be necessary to determine the conditions of the performance tests.

c. The owner or operator shall provide EPA 30 days prior notice of the performance test to afford the opportunity to have an observer present.

d. The owner or operator shall provide or cause to be provided, performance testing facilities as follows:

i. Sampling ports adequate for test methods applicable to the facility.

ii. Safe sampling platform(s).

iii. Safe access to sampling platform(s).

iv. Utilities for sampling and testing equipment.

f. Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified by EPA. For the purpose of determining compliance with an emission limitation, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the approval of EPA, be determined by using the arithmetic mean of the other two runs.

g. Continuous monitoring requirements

Continuous monitors shall be installed and operated in accordance with 40 CFR 60.45 and 60.13. In addition, a continuous SO_2 monitor shall be installed prior to the flue gas desulfurization system for purposes of calculating SO_2 removal efficiencies.

7. Excess Emission Reporting Requirements

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

standards, a relaxation of conditions included in the permit due to state permitting requirements, or the inclusion of less restrictive air emission limitations in the air permits.

c. All other modifications shall be made in accordance with Section 403.516, F.S.

CONDITIONS OF CERTIFICATION - SPECIAL

I. Air

The construction and operation of the Unit No. 3 at the McIntosh Plant shall be in accordance with all applicable provisions of the Chapters 62-210 - 62-297 ~~17-2, 17-5, and 17-7~~, Florida Administrative Code. The permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions shall not exceed those specified in Chapter ~~17-2.04(6)(e) 1.~~ 62-296.405, and 62.296.800(2)(a)1., FAC.

2. ~~The permittee shall not burn a fuel oil containing more than an average of 0.7% sulfur unless it can be demonstrated that either, a) heat efficiency is such as to insure compliance with all applicable emission limitations, or b) that a flue gas desulfurization unit is installed that will insure compliance with applicable emission limitations.~~

a. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 1.2 pounds per million BTU heat input in accordance with 40 CFR 60 Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for which Construction Started After August 17, 1971.

b. A flue gas desulfurization system will be

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

c. Continuous burning of natural gas, low sulfur fuel oil (less than or equal to 0.5 percent sulfur by weight), or combinations of these two fuels with or without the use of the SO_2 scrubber will be allowed.

d. The burning of high sulfur oil (greater than 0.5 percent by weight) or a combination of high sulfur oil and municipal refuse as an emergency fuel without the use of the SO_2 scrubber will be allowed only when the flue gas desulfurization system malfunctions to the extent that the burning of coal would cause emission limitations to be exceeded. Sulfur dioxide emitted to the

atmosphere from the boiler shall not exceed 0.8 pounds per million BTU under this condition.

e. During malfunctions of equipment which cause an interruption of the coal feed to the boiler, the burning of high sulfur oil (greater than 0.5 percent by weight) or a combination of high sulfur oil and municipal refuse will be allowed only if all flue gases are fully scrubbed by the SO_2 scrubber. Sulfur dioxide emitted to the atmosphere from the boiler shall not exceed 0.8 pound per million Btu under this condition.

3. - no change

4. Particulate emissions from the coal handling facilities:

a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system, or coal transfer and loading system ~~processing coal~~, visible emissions which exceed 20 percent opacity.

b. - no change

5. Particulate matter emitted into the atmosphere from the boiler shall not exceed:

Mode of Firing	lb/10^6 BTU Heat Input
Coal	0.044
Coal/Petcoke	0.044
Coal/Refuse	0.050
Coal/Petcoke/Refuse	0.050
Oil	0.070
Oil/Refuse	0.075

B. Air Monitoring Program

1. ~~The permittee shall install and operate continuously monitoring devices for the Unit No. 3 boiler exhaus- for sulfur dioxide, nitrogen dioxide and opacity. The~~

~~monitoring devices shall meet the applicable requirements of 17-2.00, FAC~~ Continuous monitors shall be installed and operated in accordance with 40 CFR 60.45 and 60.13. In addition, the ASTM-certified automatic solid fossil fuel sampler shall be installed which produces a representative daily sample for analysis of sulfur, moisture, heating value and ash. The solid fossil fuel analysis data shall be used in conjunction with emission factors and the continuous monitoring data to calculate SO_2 reduction.

2. - 3. - no change

4. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports, in accordance with ~~Standard Sampling Techniques and Methods of Analysis for The Determination of Air Pollutants from Point Sources, July 1975~~ Rule 62-297, F.A.C.

5. - no change

6. Emission Control Systems:

Prior to operation of the source, the owner or operator shall submit to the Department a standardized plan or procedure that will allow the company to monitor emission control equipment efficiency and enable the company to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing:

1. - no change

2. Performance tests shall be conducted and data reduced in accordance with methods and procedures in accordance with EPA or DEP-approved test methods. ~~Standard Sampling Techniques and Methods of the Determination on Air Pollutants from Point Sources, July 1975.~~

3. - 4. - no change

5. Stack tests for particulates, NO_x and SO_2 shall be performed annually in accordance with conditions 2, 3 and 4 above. CEMS and CEM's relative accuracy tests may be used to determine compliance as long as the source and test conditions are consistent with the applicable requirements.

D. Reporting

1. Stack monitoring~~, fuel usage and fuel analysis~~ data shall be reported to the Department on a quarterly basis in accordance with 40 CFR, Part 60, Section 60.7(c),(d) and in accordance with 62-297.405(1)(g) ~~17-2.00~~, FAC. Fuel usage and fuel analysis data shall be reported to the Department on an annual basis.

2. - no change

E. - F. - no change

G. Reporting:

1. Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to ~~Mr. Hamilton S. Oven, Jr.,~~ the Administrator, ~~of Power Plant~~ Siting Coordination Office, Department of Environmental Protection ~~Regulation~~, 2600 Blair Stone Road, MS 48, Tallahassee, Florida 32399-2400.

2. Lakeland shall maintain and submit to the Department on an annual basis for a period of five years from the date the unit is initially in commercial operation, co-fired with petroleun coke, information demonstrating in accordance with 40 CFR 52.21 (b)(33) and 40 CFR 52.21

(b)(21)(v) that the operational changes did not result in emission increases of carbon monoxide, nitrogen oxides, or sulfuric acid mist.

H. Fuels:

The following fuels may be burned:

Coal only;

Low sulfur fuel oil only (≤0.5 percent sulfur by weight);

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

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

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

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

High sulfur oil (>0.5 percent sulfur by weight) consistent with Conditions I.A.2.b. or I.A.2.c.;

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

II. Water Discharges

Discharges during construction and operation of the Unit No. 3 shall be in accordance with all applicable provisions of Chapter 62-302 ~~17-3~~, Florida Administrative Code and 40 CFR 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category. In addition, the permittee shall comply with the following conditions of certification:

A. Pretreatment Standards

Wastewater discharges from Unit No. 3 to the Lakeland wetlands treatment system shall comply with the effluent limitation guidelines contained in 40 CFR § 423.16 ~~, Part 423.12~~ and amendments. The specific standards applicable to the

State of Florida Department of Environmental Regulation
City of Lakeland
Power Plant No. 3 - Unit No. 3
Case No. PA 74-06
CONDITIONS OF CERTIFICATION

SPECIAL

I. Air

The construction and operation of the Unit No. 3 at the McIntosh Plant shall be in accordance with all applicable provisions of Chapters 17-2, 17-5, and 17-7, Florida Administrative Code. The permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions shall not exceed those specified in Chapter 17-2.04(5)(e) 1., FAC.

2. The permittee shall not burn a fuel oil containing more than an average of 0.7% sulfur unless it can be demonstrated that either, a) heat efficiency is such as to insure compliance with all applicable emission limitations, or b) that a flue gas desulfurization unit is installed that will insure compliance with applicable emission limitations.

3. The height of the boiler exhaust stack for Unit 3 shall be not less than 250 feet above grade. The height of stacks for future units shall be determined after review of supplemental applications.

4. Particulate emissions from the coal handling facilities:

a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity.

b. The applicant must submit to the Department within five (5) working days after it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, a copy of the formal bid from the successful bidder, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of such device if the Department determines the selected control device to be inadequate to meet the visible emission limit specified in 5 (a) above.

B. Air Monitoring Program

1. The permittee shall install and operate continuously monitoring devices for the Unit No. 3 boiler exhaust for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of 17-2.08, FAC.

2. The permittee shall operate two ambient monitoring device for sulfur dioxide in accordance with EPA reference methods in 40 CFR, Part 53 and two ambient monitoring device for suspended particulates. New and existing monitoring devices shall be located as designated by the Department. The frequency of operation shall be every six days or as specified by the Department.

3. The permittee shall maintain a daily log of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values to facilitate calculations of emissions.

4. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports, in accordance with Standard Sampling Techniques and Methods of Analysis for The Determination of Air Pollutants from Point Sources, July 1975.

5. The ambient monitoring program may be reviewed annually beginning two years after start-up of Unit No. 2 by the Department and the permittee.

6. Emission Control Systems:

Prior to operation of the source, the owner or operator shall submit to the Department a standardized plan or procedure that will allow the company to monitor emission control equipment efficiency and enable the company to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing:

1. Within 60 days after achieving the maximum capacity at which the facility will be operated, but no later than 180 days after initial startup, the owner or operator shall conduct performance tests for particulates and SO_2 and promptly furnish the Department a written report of the results of such performance tests.

2. Performance tests shall be conducted and data reduced in accordance with methods and procedures in accordance with Standard Sampling Techniques and Methods of the Determination on Air Pollutants from Point Sources, July 1975.

3. Performance tests shall be conducted under such conditions as the Department shall specify based on representative performance of the facility. The owner or operator shall make available to the Department such records as may be necessary to determine the conditions of the performance tests.

4. The owner or operator shall provide the Department with 30 days prior notice of the performance tests and afford the Department the opportunity to have an observer present.

5. Stack tests for particulates NO_x and SO_2 shall be performed annually in accordance with conditions 2, 3 and 4 above.

D. Reporting

1. Stack monitoring, fuel usage and fuel analysis data shall be reported to the Department on a quarterly basis in accordance with 40 CFR, Part 60, Section 60.7 and in accordance with 17-2.08, FAC.

2. Ambient air monitoring data shall be reported to the Department quarterly by the last day of the month following the quarterly reporting period utilizing the SAROAD or other format approved by the Department in writing.

E. Coal Characteristics and Contracts

Before approval can be granted by the Department for use of control devices, characteristics of the coal to be fired must be known. Therefore, before these approvals are granted, the applicant must submit to the Department copies of coal contracts which should include the expected sulfur content, ash content, and heat content of the coal to be fired. These data will be used by the Department in its evaluation of the adequacy of the control devices.

F. Coal Information

As an alternative to the submittal of contracts for purchase of coal under condition E above, the applicant may submit the following information:

1. The name of the coal supplier;

2. The sulfur content, ash content, and heat content of the coal as specified in the purchase contracts;

3. The location of the coal deposits covered by the contract (including mine name and seam);

4. The date by which the first delivery of coal will be made;

5. The duration of the contract; and

6. An opinion of counsel for the applicant that the contract(s) are legally binding enforceable.

G. Reporting:

Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to Mr. Hamilton S. Oven, Jr., Administrator of Power Plant Siting, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32301.

II. Water Discharges

Discharges during construction and operation of the Unit No. 3 shall be in accordance with all applicable provisions of Chapter 17-3, Florida Administrative Code and 40 CFR 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category. In addition, the permittee shall comply with the following conditions of certification:

A. Pretreatment Standards

Wastewater discharged from Unit No. 3 to the Lakeland municipal sewerage system shall comply with the pretreatment standards for new sources as contained in 40 CFR, Part 423.16 and amendments. The specific standards applicable to the facilities as planned are:

1. Cooling Tower Blowdown

There shall be no detectable amounts of materials added for corrosion inhibition, including but not limited to zinc and chromium in cooling tower blowdown discharged to the sewer system.

2. pH

The pH of all discharges shall be within the range of 6.0 to 9.0.

3. Polychlorinated Biphenyl Compounds

There shall be no release to the environment of polychlorinated biphenyl compounds.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Diesel Peaking Units 2 and 3**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown *		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): ***ARMS Identification Numbers: 002 and 003. Each diesel powered electric generating unit rated at 2.5 MW fired with diesel (No. 2 distillate) fuel only. These units are identical and previously permitted collectively.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	**1 Jan 1970**
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	**5** MW
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		**28**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Operating Capacity Comment (limit to 200 characters): **Maximum heat input per diesel peaking unit.**			

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment LMC-EU4-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **See Att. LMC-EU4-L1**
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Each emission unit (diesel) has separate stack.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **S004 = Diesel Unit 2; S005 = Disel Unit 3**
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **20** feet
7. Exit Diameter: **2.6** feet
8. Exit Temperature: **715** °F

9. Actual Volumetric Flow Rate:	**24,529** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **409.1** North (km): **3106.3**	
14. Emission Point Comment (limit to 200 characters): **Data from APIS file for each diesel generator.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Diesel Oil**	
2. Source Classification Code (SCC): **2-01-001-02**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **0.2**	5. Maximum Annual Rate: **1,766**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.5**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **138**	
10. Segment Comment (limit to 200 characters): **Maximum Hourly Rate: 0.2016. Maximum hourly and annual rates based on operating permit limits for each Diesel Unit; based on 19,500 Btu/lb; 7.1 lb/gal diesel fuel.**	

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
SO2			EL
NOx			NS
CO			NS
VOC			NS
PM10			NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **14.3** lb/hour **62.7** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.5 %S fuel oil** Reference: **Oper. Permit Limit**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **201.6 gal/hr x 7.1 lb/gal x 0.005 lbs/lb fuel x 2 lb SO2/lbs = 14.3 lb/hr**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Potential emissions provided for each diesel unit. Limit not defined as applicable requirement in Rule 62-210.200.**

Emissions Unit Information Section 4 of 7
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.5 %Sulfur Oil**	
4. Equivalent Allowable Emissions:	**14.3** lb/hour **62.7** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Analysis (vendor)**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Operating Permit Limi (AO53-244726); not an applicable requirement as defined in Rule 62-210.200.**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20.** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **Annual VE test if > 400 HOURS**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-296.320(4)(b)1.**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE99**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **None**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1) allows up to 100% for 2 hours (120 minutes) per 24-hour period for startup, shutdown or malfunction.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[X] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[ ] C	[ ] E	[X] Unknown
	SO_2	[ ] C	[ ] E	[X] Unknown
	NO_2	[ ] C	[ ] E	[X] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: LMC-EU4-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: LMC-EU4-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: LMC-EU4-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[X] Attached, Document ID: LMC-EU4-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[X] Not Applicable

ATTACHMENT LMC-EU4-D

EMISSIONS UNIT REGULATIONS

ATTACHMENT LMC-EU4-D
Applicable Requirements Listing - Power Plants Non-Acid/NSPS Rain Units

EMISSION UNIT ID: EU4 - McIntosh Plant - Diesel Peaking Units 2 and 3

FDEP Rules:

Stationary Sources-General:

62-210.700(1)	- Excess Emissions (startup/shutdown/malfunction)
62-210.700(4)	- Poor Maintenance
62-210.700(6)	- Notification

Stationary Sources-Emission Standards/RACT:

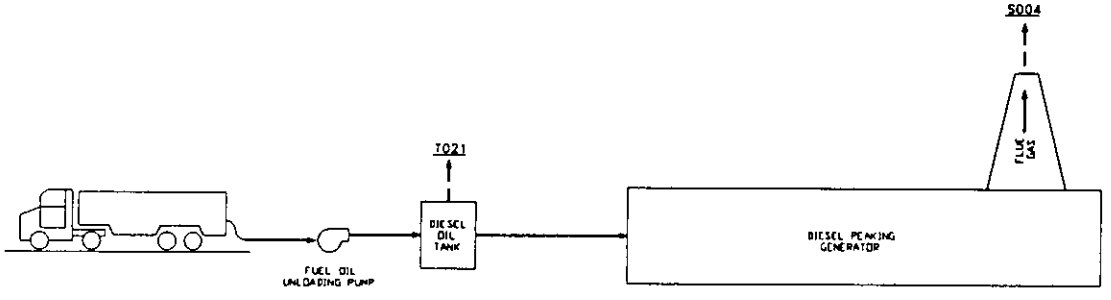
62-296.320(4)(b)	- General VE

Stationary Sources-Emission Monitoring:

62-297.310(2)(b)	- Operating Rate
62-297.310(4)(a)2.	- Applicable Test Procedures;Sampling time
62-297.310(5)	- Determination of Process Variables
62-297.310(7)(a)3.	- Permit Renewal Test Required
62-297.310(7)(a)4.a.	- Annual Test
62-297.310(7)(a)9.	- FDEP Notification - 15 days
62-297.310(8)	- Test Reports

ATTACHMENT LMC-EU4-L1

PROCESS FLOW DIAGRAM



REV NO	BY	DATE	APPR.	REVISION
3	MG	5-29-96	MP	ISSUED FOR TITLE V
2	MG	5-15-96	MP	CHANGE TITLE
1	MG	8-9-95		DELETED TITLE

LAKELAND ELECTRIC & WATER

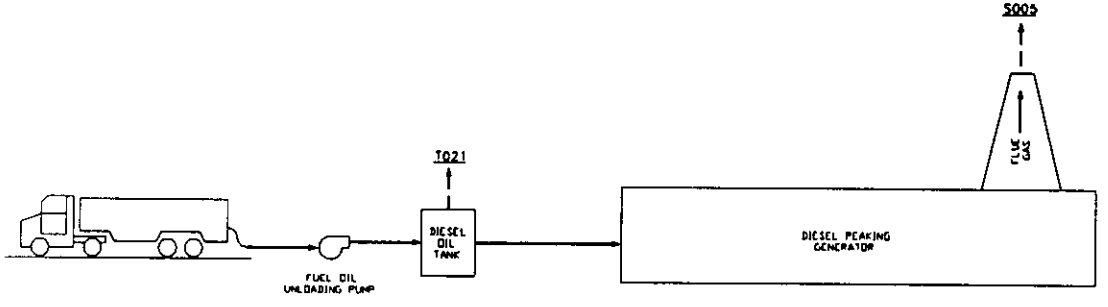
DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
DIESEL PEAKER NO. 2
(DIESEL NO. 1)
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
APPR. BY:
DATE 9-19-94

CAD | SCALE NONE
PROJ NO AIR PERMIT
DWG. NO. LMC-EU4-L1/SKM-28
REV. 3

SIZE B



REV. NO.	BY	DATE	APPR.	REVISION
1	MG	8-9-95		DELETED T116
2	MG	5-15-96	MP	CHANGE TITLE
3	MG	5-29-96	MP	ISSUED FOR TITLE V

LAKELAND ELECTRIC & WATER

DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
DIESEL PEAKER NO. 3
(DIESEL NO. 2)
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
DATE 9-19-94
APPR. BY:

CAD | SCALE NONE
PROJ. NO. AIR PERMIT
DWG. NO. LMC-EU4-L1/SKM-29 | REV. 3

SIZE B

ATTACHMENT LMC-EU4-L2

FUEL ANALYSIS OR SPECIFICATION

Attachment LMC-EU4-L2

Fuel Analysis

No. 2 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	30[1]	-
Relative density	6.92 lb/gal [2]	
Heat content	18,400 Btu / lb (LHV)	
% sulfur	<0.5 [2]	0.5 [3]
% nitrogen	0.025 - 0.030	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from the fuel procurement specification

[2] Data from laboratory analysis

[3] Data from current air permit AO53-244726.

ATTACHMENT LMC-EU4-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT LMC-EU4-L6
PROCEDURES FOR STARTUP/SHUTDOWN

Startup and shutdown for these units are fully automatic.

Startup for the diesel units begin at low loads using distillate oil (i.e., diesel).

Corrective actions may include switching the unit from automatic (remote) to local control, or changing load conditions. Best Operating Practices based on manufacturer recommendations are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel and coasting down to stop.

ATTACHMENT LMC-EU4-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT LMC-EU4-L10
ALTERNATIVE METHODS OF OPERATION

The diesel unit can operate from 0 to 100 percent load on diesel/distillate fuel oil with no limitation on the hours of operation.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[x] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Gas Turbine Peaking Unit 1**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **004**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **Fired with diesel (No.2) fuel and natural gas**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	**1 Jan 1973**
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	**20** MW
5. Incinerator Information: Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		**330**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			

5. Operating Capacity Comment (limit to 200 characters):

Maximum heat input shown for natural gas. Maximum heat input for oil is 320 MMBtu/hr

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

	hours/day		days/week
	weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment LMC-EU5-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: See Att. LMC-EU5-L1	
2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W	
6. Stack Height:	35 feet
7. Exit Diameter:	13.5 feet
8. Exit Temperature:	900 °F

9. Actual Volumetric Flow Rate:	**682,334** acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **409.2** North (km): **3106.4**	
14. Emission Point Comment (limit to 200 characters): **Exit diameter based on equiv diameter based on stack area. Stack dimensions: rectangular 13' 2" x 10' 11". Volumetric flow: given for distillate oil; for natural gas 742,174 acfm.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Distillate (No.2) Fuel Oil**	
2. Source Classification Code (SCC): **2-01-001-01**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **2.31**	5. Maximum Annual Rate: **20,236**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.5**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **138**	
10. Segment Comment (limit to 200 characters): **Maximum hourly and annual rates based on operating permit limits (AO53-244727); MMBtu per SCC based on 19,500 Btu/lb, 7.1 lb/gal diesel fuel.**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **2-01-002-01**	
3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.32**	5. Maximum Annual Rate: **2,803**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1,024**	
10. Segment Comment (limit to 200 characters): **Maximum hourly and annual rates based on permit limit; MMBtu per SCC based on 1,024 Btu/cf natural gas which a typical average.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
SO2			EL
NOx			NS
CO			NS
VOC			NS
PM10			NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **164** lb/hour **718.4** tons/year
4. Synthetically Limited? [ ] Yes [**X**] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: **0.5 %Sulfur fuel** Reference: **Oper. Permit Limit**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **2,320 gal/hr x 7.1 lb/gal x 0.005 lb S/lb fuel x 2 lb SO2/lb S = 164 lb/hr**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emissions for distillate oil firing. Limit based on AO53-244727; not an applicable requirement under Rule 62-210.200.**

Emissions Unit Information Section 5 of 7

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **OTHER**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **0.5**	
4. Equivalent Allowable Emissions:	**164** lb/hour **718.4** tons/year
5. Method of Compliance (limit to 60 characters): **Vendor Fuel Analysis**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Operating Permit Limit (AO53-244727); not an applicable requirement as defined in Rule 62-210.200.**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20.** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **Annual VE test EPA Method 9 if > 400 hours**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-296.320(4)(b)1. and 62-297.310(7)(a)8.**

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: **VE99**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour
4.	Method of Compliance: **None**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-210.700(1). Allowed for 2 hours (120 minutes) per 24 hours for startup, shutdown or malfunction.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[X] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[ ] C	[ ] E	[X] Unknown
	SO_2	[ ] C	[ ] E	[X] Unknown
	NO_2	[ ] C	[ ] E	[X] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: LMC-EU5-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: LMC-EU5-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[ ] Not Applicable
	[X] Previously Submitted, Date: 16 Jun 1995	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: LMC-EU5-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[x] Attached, Document ID: LMC-EU5-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [x] Not Applicable

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [x] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [x] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[x] Not Applicable

ATTACHMENT LMC-EU5-D

EMISSIONS UNIT REGULATIONS

ATTACHMENT LMC-EU5-D
Applicable Requirements Listing - Power Plants Non-Acid/NSPS Rain Units

EMISSION UNIT ID: EU5 - McIntosh Plant - Gas Turbine Unit 1

FDEP Rules:

Stationary Sources-General:

62-210.700(1)	- Excess Emissions (startup/shutdown/malfunction)
62-210.700(4)	- Poor Maintenance
62-210.700(6)	- Notification

Stationary Sources-Emission Standards/RACT:

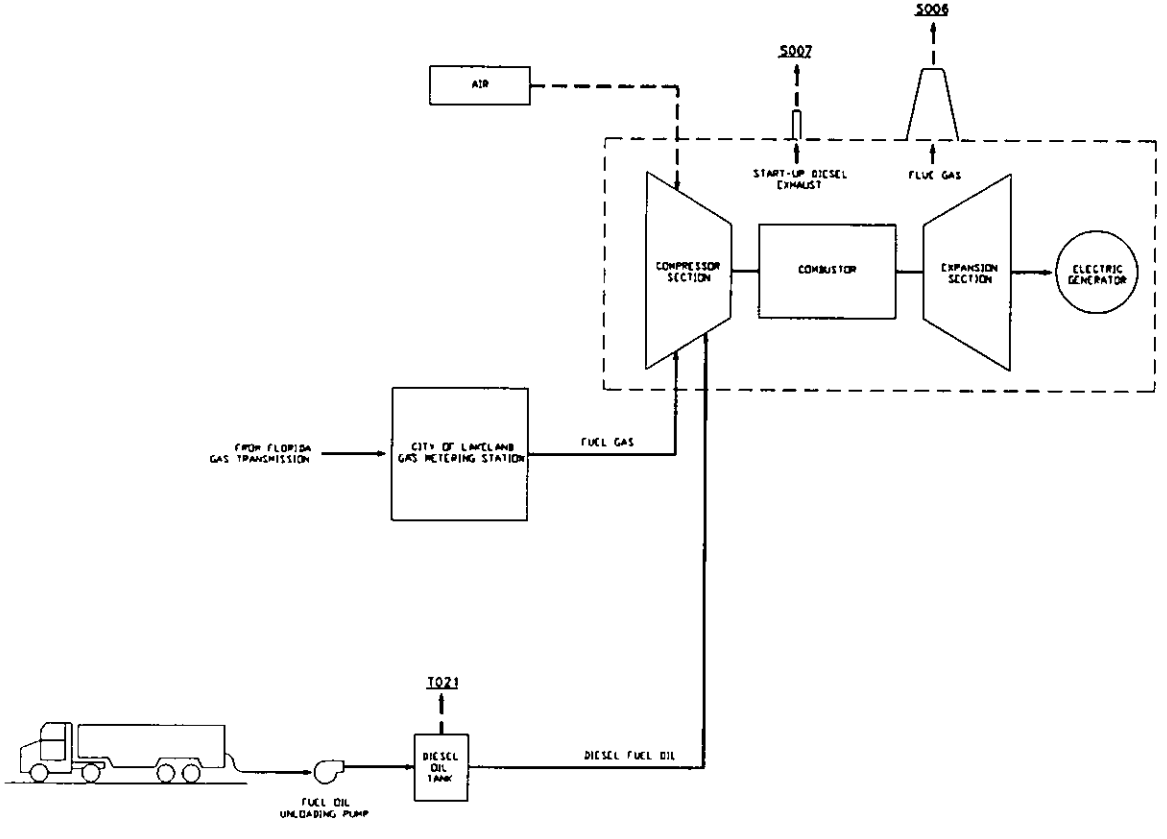
62-296.320(4)(b)	- General VE

Stationary Sources-Emission Monitoring:

62-297.310(2)(a)	- Operating Rate; reserved for CTs
62-297.310(4)(a)2.	- Applicable Test Procedures;Sampling time
62-297.310(5)	- Determination of Process Variables
62-297.310(7)(a)3.	- Permit Renewal Test Required
62-297.310(7)(a)4.a.	- Annual Test
62-297.310(7)(a)8	- CTs; Exempts Test <400hrs/yr; 1 per 5 yr
62-297.310(7)(a)9.	- FDEP Notification - 15 days
62-297.310(8)	- Test Reports

ATTACHMENT LMC-EU5-L1

PROCESS FLOW DIAGRAM



REV. NO.	BY	DATE	APPR.	REVISION
1	MG	8-9-95		DELETED T116
2	MG	5-15-96	HP	CHANGE TITLE
3	MG	5-29-96	HP	ISSUED FOR TITLE V

LAKELAND ELECTRIC & WATER

DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
GAS TURBINE PEAKER NO. 1
PROCESS FLOW DIAGRAM

DIVISION	PRODUCTION ENGINEERING	CAD	SCALE NONE
ENGINEER	PATTERSON	PROJ. NO.	AIR PERMIT
DRN. BY:	MGIEGER	DATE 9-19-94	DWG. NO. LMC-EU5-L1/SKM-30 REV. 3
APPR. BY:			

SIZE B

ATTACHMENT LMC-EU5-L2

FUEL ANALYSIS OR SPECIFICATION

Attachment LMC-EU5-L2

Fuel Analysis

Natural Gas Analysis

Parameter	Typical Value	Max Value
Relative density	0.58 (compared to air)	
heat content	950 - 1124 Btu/cu ft. (hhv)	
% sulfur	0.43 grains/CCF [1]	1 grain/100 CF
% nitrogen	0.8% by volume	
% ash	negligible	

Note: The values listed are "typical" values based upon information supplied by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data from laboratory analysis

Attachment LMC-EU5-L2

Fuel Analysis

No. 2 Fuel Oil

Parameter	Typical Value	Max Value
API gravity @ 60 F	30[1]	-
Relative density	6.92 lb/gal [2]	
Heat content	18,400 Btu / lb (LHV)	
% sulfur	<0.5 [2]	0.5 [3]
% nitrogen	0.025 - 0.030	
% ash	negligible	0.01 [1]

Note: The values listed are "typical" values based upon 1) information gathered by laboratory analysis, and 2) fuel purchasing specifications. However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

[1] Data taken from the fuel procurement specification

[2] Data from laboratory analysis

[3] Data from current air permit (AO53-244727) not an applicable requirement under 62-210.200.

ATTACHMENT LMC-EU5-L6

PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT LMC-EU5-L6
PROCEDURES FOR STARTUP/SHUTDOWN

Startup for the gas turbine begins with an electric control system using a switch to initiate the unit startup cycle. The unit generator is synchronized with the grid and can be "on line" (electrical power production) within 5 minutes from startup.

The gas turbine has no emission controls. If excess emissions are encountered during startup or shutdown, the nature and cause of any malfunction is identified, along with the corrective action taken or preventative measures adopted. Corrective actions may include switching the unit from automatic (remote) to local control. Best Operating Practices are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit generator from the system electrical grid), shutting off the fuel, and coasting to a stop.

ATTACHMENT LMC-EU5-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT LMC-EU5-L10
ALTERNATIVE METHODS OF OPERATION
GAS TURBINE UNIT 1

The gas turbine can operate on both natural gas and fuel oil (No. 2 fuel). The maximum sulfur content in the fuel oil will not exceed 0.5 percent. This unit can operate from 0 to 100 percent load for the entire year (i.e., 8,760 hours) and can fire either fuel oil or natural gas fire with no restrictions on hours of operation.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Emissions Associated with Material Handling(fugitive & vent)**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [X] Unknown		
3. Emissions Unit Status Code: A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): **This emission unit information section addresses fugitive emissions and other emissions from materials handling. The materials handled include coal, petroleum coke, refuse, RDF, limestone, Quick Lime, fly ash, bottom ash and FGD by-products.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters): **Water, Cyclones and bag filters used to control PM**
2. Control Device or Method Code: **99**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **1 Sep 1982**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating:	MW
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		**See Comment**
4. Maximum Production Rate:		**See Comment**
5. Operating Capacity Comment (limit to 200 characters): **Thru-puts in TPY: 1,398,121 coal;269,455 petcoke;132,334 Limestone;6,714 lime 75,000 MSW/RDF;167,775 flyash;41,944 Bottom ash;429,185 FGD by-prod. From input/output EU3**		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:		
hours/day		days/week
weeks/yr	**8,760**	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment LMC-EU6-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: See Att. LMC-EU6-L1
2. Emission Point Type Code: [ ] 1 [ ] 2 [ ] 3 [x] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [x] F [ ] H [ ] P [ ] R [ ] V [ ] W
6. Stack Height: feet
7. Exit Diameter: feet
8. Exit Temperature: °F

9. Actual Volumetric Flow Rate:	acfm
10. Percent Water Vapor:	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Not Applicable**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Coal**	
2. Source Classification Code (SCC): **A2530000040**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **1,398,121**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on inputs to Emission Unit 3.**	

Segment Description and Rate: Segment 2 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Petroleum Coke**
2. Source Classification Code (SCC): **A2530000000**
3. SCC Units: **Tons**

4. Maximum Hourly Rate:	5. Maximum Annual Rate: **269,455**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	

10. Segment Comment (limit to 200 characters): **Annual rate based on inputs to Emission Unit 3.**

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 3 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Limestone**	
2. Source Classification Code (SCC): **A2530000100**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **132,334**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on input to FGD system associated with Emission Unit 3.**	

Segment Description and Rate: Segment 4 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **MSW/RDF**
2. Source Classification Code (SCC): **A2530000000**
3. SCC Units: **Tons**

4. Maximum Hourly Rate:	5. Maximum Annual Rate: **75,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	

10. Segment Comment (limit to 200 characters): **Annual rate based on inputs to Emission Unit 3.**

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 5 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Flyash**	
2. Source Classification Code (SCC): **A2530000000**	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **167,775**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on output from Emission Unit 3.**	

Segment Description and Rate: Segment 6 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **FGD Byproduct**	
2. Source Classification Code (SCC): **A2530000000**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **429,185**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on output from Emission Unit 3.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 7 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Lime**	
2. Source Classification Code (SCC): **A2530000000**	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **6,714**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on requirements from EU3**	

Segment Description and Rate: Segment 8 of 8

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Bottom Ash**	
2. Source Classification Code (SCC): **A2530000000**	
3. SCC Units: **Tons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **41,944**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on output from EU3.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	099		WP
PM10	099		NS

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: **VE20**
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: **20.** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: **NONE**
5.	Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-296.320(4)(b)1.; PSD-FL-008; 40 CFR 60.252(c)**

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [x] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[x] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[x] C	[ ] E	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1.	Process Flow Diagram	
	[X] Attached, Document ID: LMC-EU6-L1 [ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____ [X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[X] Attached, Document ID: LMC-EU6-L3 [ ] Not Applicable	[ ] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____ [X] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____ [ ] Previously Submitted, Date: _____	[X] Not Applicable
6.	Procedures for Startup and Shutdown	
	[ ] Attached, Document ID: _____	[X] Not Applicable
7.	Operation and Maintenance Plan	
	[ ] Attached, Document ID: _____	[X] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[ ] Attached, Document ID: _____	[X] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

[x] Attached, Document ID: LMC-EU6-L10 [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [x] Not Applicable

12. Identification of Additional Applicable Requirements

[x] Attached, Document ID: LMC-EU3-L12 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [x] Not Applicable

14. Acid Rain Permit Application (Hard Copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[x] Not Applicable

ATTACHMENT LMC-EU6-D

EMISSIONS UNIT REGULATIONS

ATTACHMENT LMC-EU6-D

Applicable Requirements Listing - Power Plant Facility

EMISSION UNIT: EU6 - McIntosh Plant - Material Handling

FDEP Rules

62-204.800(7)(b)29(State Only)	- NSPS Subpart Y
62-204.800(7)(d)(State Only)	- NSPS General Provisions

Stationary Sources-General:

62-210.700(1)	- All EUs; (startup/Shutdown/Malfunction)
62-210.700(4)	- All EUs; poor maintenance
62-210.700(6)	- All EUs; reporting

Stationary Sources-Emission Standards:

62-296.320(4)(b)	- General VE
62-296.320(4)(c)	- Unconfined PM

Federal Rules:

NSPS Subpart Y

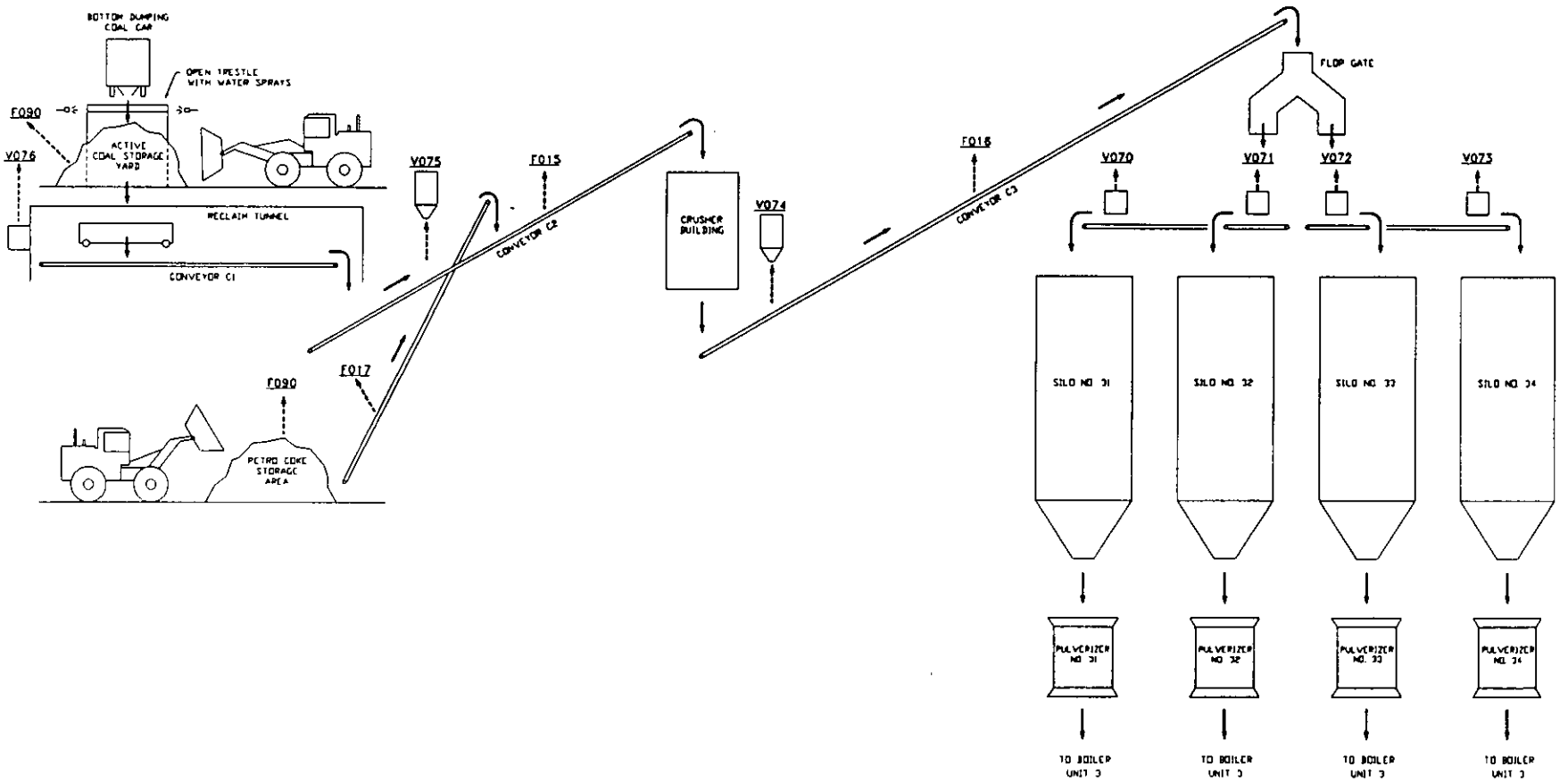
40 CFR 60.252(c)	- VE (20%) Coal processing and conveying
40 CFR 60.254(b)(2)	- Method 9

NSPS General Provisions

40 CFR 60.11(b)	- Compliance (opacity determined by EPA Method 9)
40 CFR 60.11(c)	- Compliance (opacity; excludes startup/shutdown/malfunction)
40 CFR 60.11(d)	- Compliance (maintain air pollution control equipment)
40 CFR 60.12	- Circumvention

ATTACHMENT LMC-EU6-L1

PROCESS FLOW DIAGRAM



REV. NO	BY	DATE	APPR.	REVISION
0	MG	11-2-94		ISSUED FOR TITLE V PERMIT APPLICATION
1	MG	5-15-96	MP	CHANGE TITLE
2	MG	5-29-96	MP	ISSUED FOR TITLE V

LAKELAND ELECTRIC & WATER

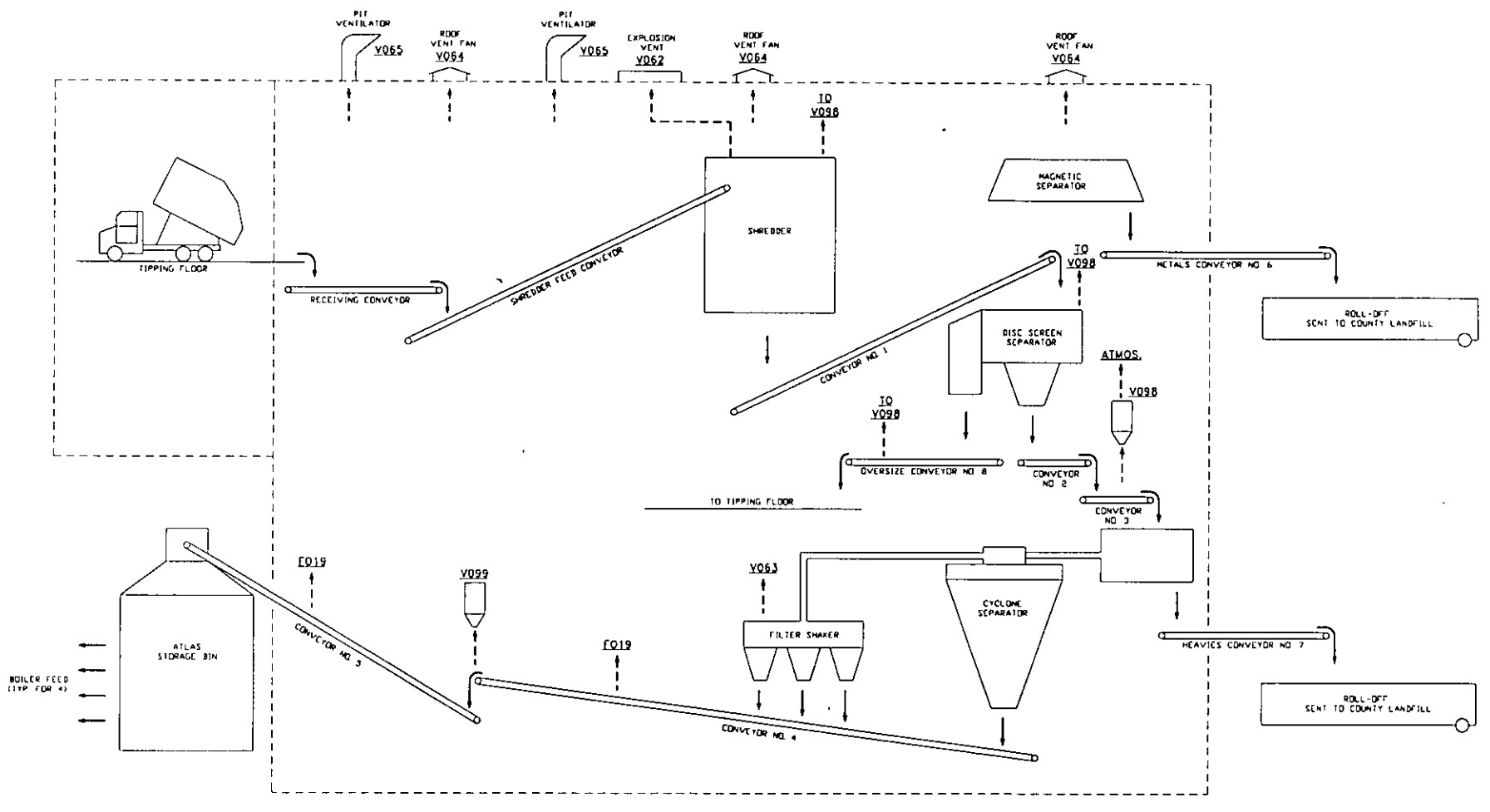
DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
COAL AND PETROCOKE STORAGE AND HANDLING SYSTEM
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
DATE 9-14-94
APPR. BY:

CAD | SCALE NONE
PROJ. NO. AIR PERMIT
DWG. NO. LMC-EU6-L1/SKM-31 | REV. 2

SIZE B



REV NO	BY	DATE	APPR.	REVISION
0	MG	11-2-94		ISSUED FOR TITLE V PERMIT APPLICATION
1	MG	5-15-96		CHANGE TITLE & V098
A	MG	X		FOR APPROVAL

LAKELAND ELECTRIC & WATER

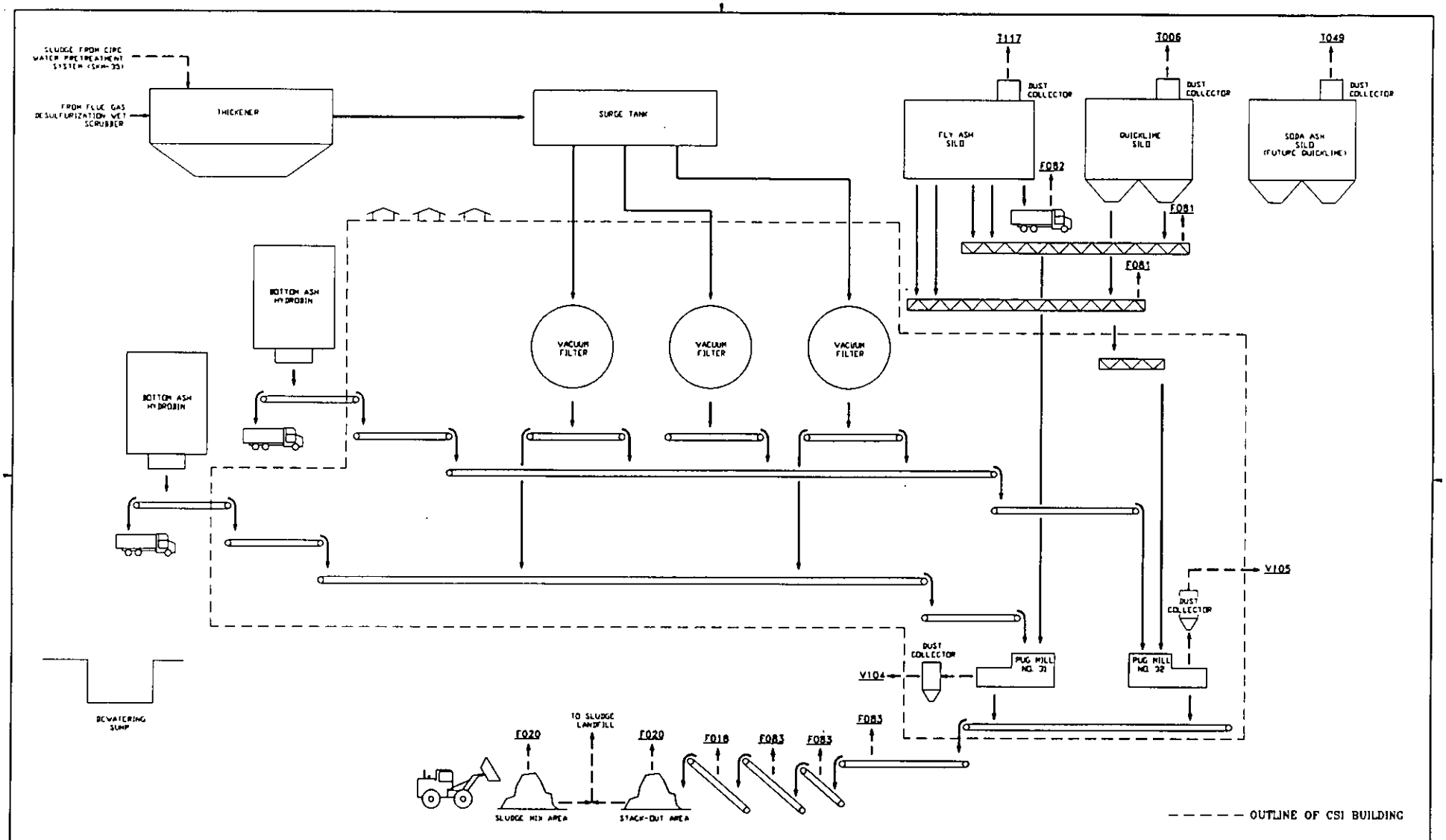
DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
REFUSE SYSTEM
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
APPR. BY:
DATE 9-14-94

CAD | SCALE NONE
PROJ. NO AIR PERMIT
DWG. NO. LMC-EU6-L1/SKM-32 | REV. 1

SIZE B



REV. NO	BY	DATE	APPR.	REVISION
1	MG	8-9-95		ADDED SLUDGE MIX AREA AND F018
2	MG	5-14-96	HP	CHANGE TITLE
3	MG	5-29-96	HP	ISSUED FOR TITLE V

LAKELAND ELECTRIC & WATER

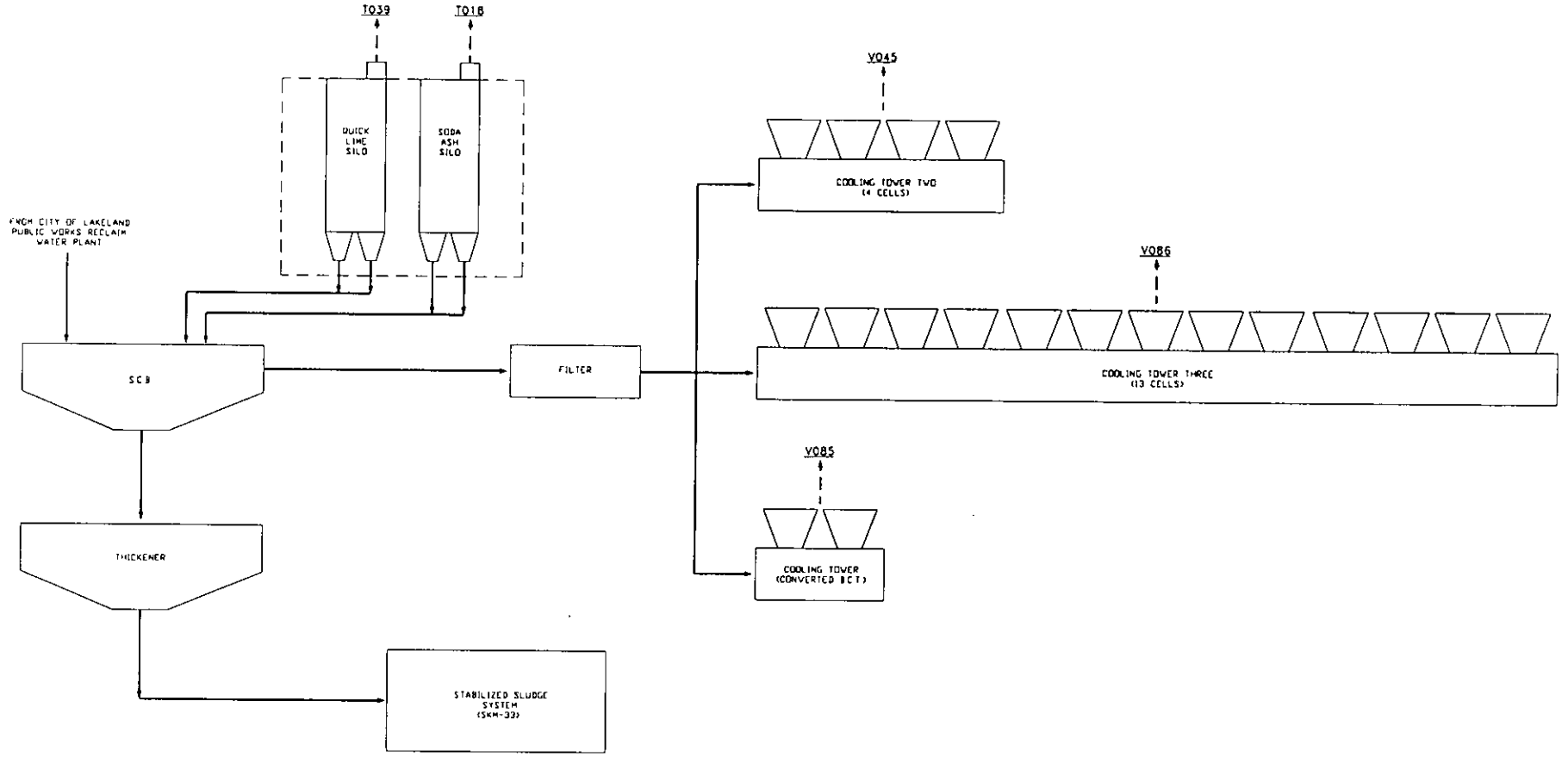
DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
STABILIZED SLUDGE SYSTEM
PROCESS FLOW DIAGRAM

DIVISION PRODUCTION ENGINEERING
ENGINEER PATTERSON
DRN. BY: MGIEGER
APPR. BY:
DATE 9-14-94

CAD | SCALE NONE
PROJ. NO. AIR PERMIT
DWG. NO. LMC-EU6-L1/SKM-33
REV. 3

SIZE B



REV NO	BY	DATE	APPR	REVISION
0	MG	11-2-94		ISSUED FOR TITLE V PERMIT APPLICATION
1	MG	5-14-96	MP	CHANGE TITLE
A	MG	X		FOR APPROVAL

LAKELAND ELECTRIC & WATER

DESCRIPTION

LAKELAND ELECTRIC & WATER UTILITIES
C.D. McINTOSH POWER PLANT
CIRCULATING WATER
PRETREATMENT SYSTEM
PROCESS FLOW DIAGRAM

DIVISION	PRODUCTION ENGINEERING		
ENGINEER	PATTERSON		
DRN. BY:	MGIEGER	DATE	9-23-94
APPR. BY:			

CAD | SCALE NONE

PROJ. NO. AIR PERMIT

DWG. NO. LMC-EU6-L1/SKM-35 | REV. 1

SIZE B

ATTACHMENT LMC-EU6-L3

DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT LMC-EU6-L3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The fugitive particulate matter emission sources associated with the material handling operations and their control is presented below (see alsoAttachment LMC-EU6-L1):

Source Name	Location ID	Material	Control	Estimated Efficiency (%)
Trestle Dump	F090A	Coal	Dust Suppression	50+
Active Storage	F090B	Coal	Enclosure	50
Conveyor C1	V075	Coal	Bag Filter	98
Conveyor C2	F015	Coal	Enclosure	90
Crusher to C3	V016	Coal	Bag Filter	98
Conveyor C3 to Flop Gate	F016	Coal	Enclosure	90
Flop Gate to Silo Conveyors	V070-73	Coal	Bag Filter	98
Active Storage	F017a	Pet Coke	Watering	50+
Pet Coke to Hopper	F017b	Pet Coke	Watering	50+
Truck Dump	F094	Limestone	Enclosure	50
Vertical Conveyor to Silo	T001	Limestone	Bag Filter	98
Silo to Conveyor	F022a	Limestone	Enclosure	90
Conveyor to Ball Mill	F022b	Limestone	Enclosure	90

Ball Mill to FGD Slurry Tank	F080	Limestone	Enclosure	90
Crusher	V074	Coal	Bag Filter	98
Truck Dump	V065	MSW	Partial Enclosure	50
Source Name	Location ID	Material	Control	Estimated Efficiency (%)
Conveying	V064	MSW	Enclosure	90
Conveyor No. 3 Vent	V098	RDF	Bag Filter	98
Shredder Cyclone	V061	MSW/RDF	Cyclone	90+
Explosive Vent	V062	MSW/RDF	Enclosure	90
Filter Shaker Vent	V063	RDF	Bag Filter	98
Conveyor No. 4	F019A	RDF	Enclosure	90
Conveyor No. 4 Vent	V099	RDF	Bag Filter	98
Conveyor No. 5 & Atlas Bin	F019B	RDF	Enclosure	90
Fly Ash to Silo	T117	Fly Ash	Bag Filter	98
Fly Ash Silo to Tanker Truck	F082	Fly Ash	Bag Filter	98
Fly Ash/Quick Lime Conveying	F081	Fly Ash and Quick Lime	Enclosure	90
Pug Mill No. 31	V104	Fly Ash/Quick Lime/FGD Sludge	Moisture and Enclosure	98

Pug Mill No. 32	V105	Fly Ash/Quick Lime/FGD Sludge	Moisture and Enclosure	98
Stabilized FGD Conveying	F083	FGD By-product	None Required	NA
Quick Lime Silo	T006	Lime	Bag Filter	98
Truck Dump at Landfill	F091	FGD By-product	Watering	50+

MSW = muncipal solid waste; RDF = refuse derived fuel; FGD = flue gas desulfurization

ATTACHMENT LMC-EU6-L10

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT LMC-EU6-L10
ALTERNATIVE METHODS OF OPERATION

The coal handling facilities can operate on any type of coal and petroleum coke. Capacities included in the application are based on the maximum production rates for Unit 3. Material handling facilities have greater capacities and can be operated in various ways as presented in the process flow diagrams. All materials are processed at different hourly and annual rates.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unregulated Emission Activities**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [X] Unknown		
3. Emissions Unit Status Code: A	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: 49
6. Emissions Unit Comment (limit to 500 characters): **This emission unit information section addresses unregulated emission activities at the facility. Tanks with greater than 10,000 gallon capacity were installed prior to July 23, 1984. See LMC-EU7-B6.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Residual (No.6) Oil**	
2. Source Classification Code (SCC): **A2505030060**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **160,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on inputs to Emission Units 1, 2 and 3 (FFFSG Units 1-3).**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **No.2 Distillate Oil/Diesel**	
2. Source Classification Code (SCC): **A2505030090**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **176,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual rate based on inputs to Emission Units 1-5. FFFSG Units 1-3; Diesel Units 2 and 3 and Gas Turbine Peaking Unit.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			NS
PM			NS
NOX			NS

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:			
	PM	[ ] C	[ ] E	[ ] Unknown
	SO_2	[ ] C	[ ] E	[ ] Unknown
	NO_2	[ ] C	[ ] E	[ ] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

ATTACHMENT LMC-EU7-B6

EMISSIONS UNIT COMMENT

ATTACHMENT LMC-EU7-B6

EMISSION UNIT COMMENT

The emission unit contains identification of unregulated activities. Since some of the activities may have been or may be subject to permitting requirements, a notification of temporary exemption is provided.

NOTIFICATION OF TEMPORARY EXEMPTIONS

Pursuant to Rule 62-210.300(3)(b)1., notice is herein provide that the emissions units listed below are not subject to a permit issued by the Department of Environmental Protection and are exempt from permitting until a final determination is made under the Title V permitting requirements (Rule 62-213 F.A.C.). These units would not have triggered review under Rules 62-212.400 or 62-212.500 or any new source performance standard listed in Rule 62-204.800 F.A.C. The type of emission units for which this notification is made includes the following:

1. Diesel drive coal tunnel sump engine,
2. Fire water UPS diesel No. 31,
3. Fire water UPS diesel No. 32,
4. CT startup diesel,
5. General Purpose diesel engines (<32,000 gal/yr),
6. Emergency generators (<32,000 gal/yr),
7. General purpose painting (< 6 gal/month average)
8. Parts cleaning,
9. Sand Blasting (Maintenance only)
10. Wastewater Treatment Caustic Tank
11. Three Cooling Towers (Unit 2 and Unit 3), and
12. Northside Waste Water Treatment Facility

The Northside Waste Water Treatment Facility is included as a contiguous facility owned by the City of Lakeland, although it has a different 2-digit Major Group SIC code, that has the potential to emit HAPs. The McIntosh Plant is a major source of HAPs based on its potential to emit [Rule 62-210.200(173)(a)] and therefore the contiguous waste water treatment plant is include in this section of the application as an unregulated activity even though different 2-digit SIC Major Groups. This facility, by itself, is not a major source as defined in Rule 62-210.200(173). In addition, the facility