



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

October 3, 1994

Mr. David McNeal  
Air, Pesticides and Toxics Management Division  
U.S. EPA Region IV  
345 Courtland Street, N.E.  
Atlanta, GA 30365

RE: Lakeland Electric & Water - C.D. McIntosh Jr. - Units 1, 2, and 3  
Title IV CEMS Monitoring Plan

Dear Mr. McNeal:

The Emissions Monitoring Section has reviewed Lakeland Electric & Water's CEMS Monitoring Plan submitted for the Part 75 certification of their C.D. McIntosh Jr. facility (Units 1, 2, and 3). The following comments were noted:

- (1) The drawings do not show the specific sampling points for the gas sampling probes or the monitor paths for the opacity monitors in the cross-sectional area of the stacks.
- (2) The gas and oil fuel flowmeters for Units 1 and 2 were not assigned serial numbers in Table B.
- (3) The CO<sub>2</sub> monitor (Component ID# 003) used for the CO<sub>2</sub> monitoring system and the NO<sub>x</sub> monitoring system of Unit 2 was assigned a different serial number in Table B for each of the two systems.
- (4) The backup DAHS (Component ID# 932) for the gas fuel flowmeter system (System ID# 327) of Unit 3 has a different serial number than the other systems which use the same DAHS in Table B.
- (5) The span values associated with the maximum potential velocity (MPV) were not calculated.
- (6) The maximum expected concentration (MEC) for the SO<sub>2</sub> was not stated and a span value of 800 ppm was stated without showing the equations or calculations used to arrive at this value. It is unclear whether the span value was determined by calculating a MEC using equation A-2 as specified in Part 75, Appendix A, Section 2.1.1.2 and then multiplying the resulting value by 125% and rounding up the resultant concentration the nearest multiple of 10.
- (7) The full-scale range setting for the flow monitor on Unit 2 does not appear to be greater than the span value. The span value for the flow monitor is equal to 125% of the maximum potential flow (MPF). The MPF for Unit 2 is 255,418 scfm. Therefore, the resulting span value should be 319,273 scfm which is greater than the full-scale range setting of 315,500 scfm.
- (8) A Data Flow Diagram illustrating the complete information handling path from the CEM output signals to the final report was not included.
- (9) The formulas in Table C enclose the component ID and system ID with ( ) parenthesis. It is unclear if this is a reference to the signals from the monitors. If it is, the formulas should identify the component ID and system ID by enclosing them with { } brackets.

Mr. David McNeal

October 3, 1994

Page Two

- (10) The equations in Table C that incorporate previously stated formulas have identified the previous formula IDs by enclosing them with ( ) parenthesis. To make it clear that the previously stated formulas are being incorporated into another equation, the formula IDs used in the equation should be identified by enclosing them with { } brackets.
- (11) The NO<sub>x</sub> equation (Formula F-6) in Table C did not use the updated conversion (K) factor of  $1.194 \times 10^{-7}$  (lb/dscf)/ppm NO<sub>x</sub>.
- (12) The formula to determine the F<sub>c</sub>-factor to be used in the NO<sub>x</sub> and heat input formulas for Units 1 and 2 should separate the numerator and the denominator of the equation by enclosing them in parenthesis. The equation should be stated as:  $F_c = (F\#\{202\}(1420) + F\#\{203\}(1040)) / (F\#\{202\} + F\#\{203\})$ .
- (13) The heat input formulas for Units 1 and 2 have not included a factor of 100 in the denominator of the equation. The formula should be  $HI = (Q_w) \times (1/F_c) \times (\%CO_2/100)$  rather than  $HI = (Q_w) \times (1/F_c) \times (\%CO_2)$ .
- (14) The facility plans to measure SO<sub>2</sub> emissions when a particular unit is firing natural gas as its only fuel source by using the procedures in Appendix D. It appears that this will only be allowable for Units 1 and 2 because they combust oil and gas, while Unit 3 combusts coal and gas.
- (15) There was no data submitted to support the 2% accuracy requirement for the fuel flowmeters used to determine SO<sub>2</sub> emissions by the procedures of Appendix D.
- (16) The test protocol was not submitted with the monitoring plan as required by 40 CFR 75.53 (c)(1).

If you have any questions, please contact Louis Nichols or Jim Boylan at (904) 488-1344, or write to me.

Sincerely,



Michael D. Harley, P.E., DEE  
P.E. Administrator  
Emissions Monitoring Section

Enclosure

cc: William Thomas, Southwest District

WP 11/3/94  
BILL PRO

route; DZELL  
file

Department of Environmental Protection

# Routing and Transmittal Slip

To: (Name, Office, Location)

1. William Thomas - Southwest District

2.

3.

4.

Remarks:

This is a copy of the letter that was sent to EPA regarding the Title IV CEMS monitoring plan for the Part 75 certification of Lakeland Electric and Water's C.D. McIntosh Jr. facility.

**RECEIVED**  
OCT 05 1994

Department of Environmental Protection  
SOUTHWEST DISTRICT

BY \_\_\_\_\_

From: Jim Boylan

Date 10/03/94

Phone SC 278-1344



File

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

4520 OAK FAIR BLVD.  
TAMPA, FLORIDA 33610-7347  
813-623-5561  
Suncom--552-7612

BOB MARTINEZ  
GOVERNOR  
DALE TWÄCHTMANN  
SECRETARY  
DR. RICHARD D. GARRITY  
DISTRICT MANAGER

February 15, 1988

Ms. Farzie Shelton  
Chemical Engineer  
Environmental Division  
City of Lakeland Department  
of Electric & Water Utilities  
1000 East Parker Street  
Lakeland, Florida 33801

Dear Ms. Shelton:

RE: Utilization of KM9003/KM9103  
Teledyne Oxygen Analyzer

This is in response to your request on the referenced matter to use a Digital Readout Electronic Oxygen Analyzer to determine the percent oxygen in flue gas during the compliance stack test.

After reviewing the specifications and the operating procedure for these analyzers, I have no objection to your company utilizing these instruments during the stack tests.

Sincerely,

C.S. Lee  
Air Compliance Engineer

CSL/js

cc: Bill Thomas



# LAKELAND ELECTRIC & WATER

Governor's Energy Partner

July 29, 1986

Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

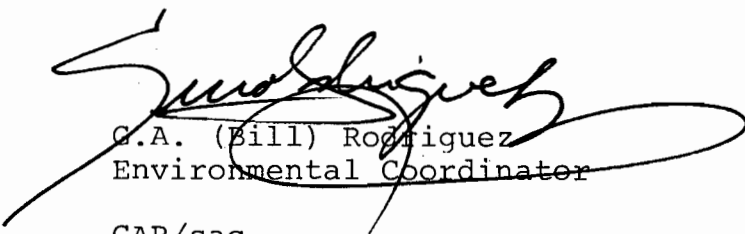
Attention: Mr. Bill Brown

Reference: City of Lakeland, Quarterly Fuel Reports

Dear Mr. Brown:

Please find enclosed, the fuel reports for the third quarter of 1986 for the Larsen Memorial Power Plant, Units 4-7 and the C.D. McIntosh, Jr. Power Plant, Units 1, 2 and 3.

Sincerely,

  
G.A. (Bill) Rodriguez  
Environmental Coordinator

GAR/sac

Enclosures

D. E. R.  
AUG 01 1986  
SOUTH WEST DISTRICT  
TAMPA

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTELY FUEL REPORT

UNIT/FERMIT I.C.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (\$)
4/A053-99003	April 1986	1,252	956.4	1.95
5/A053-99001	April 1986	900.0	-0-	-0-
6/A053-102240	April 1986	3,416.5	320.0	1.95
7/A053-102239	April	43,579.6	1,323.3	1.95
4/A053-99003	May 1986	-0-	-0-	-0-
5/A053-99001	May 1986	11.6	-0-	-0-
6/A053-102240	May 1986	1,742.7	288.4	1.85
7/A053-102239	May 1986	46.6	-0-	-0-
4/A053-99003	June 1986	230.0	3,603.4	2.40
5/A053-99001	June 1986	2,337.9	10,150.6	2.40
6/A053-102240	June 1986	1,124.3	10,041.5	2.40
7/A053-102239	June 1986	2,349.5	14,254.9	2.40

D. E. R.  
AUG 01 1986  
SOUTH WEST DISTRICT  
TAMPA

CITY OF LAKELAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-76654	April 1986	239,099.1	1,643.3	-0-	2.40
2/A053-99463	April 1986	53,980.6	-0-	-0-	-0-
3/PA 74-06	April 1986	-0-	-0-	34,144.0	1.56
1/A053-76654	May 1986	67,242.7	20,496.7	-0-	2.34
2/A053-99463	May 1986	228,822.4	1,318.8	-0-	0.71
3/PA 74-06	May 1986	-0-	-0-	57.0	1.56
1/A053-76654	June 1986	153,310.7	8,765.5	-0-	2.30
2/A053-99463	June 1986	271,613.6	11,012.2	-0-	0.73
3/PA 74-06	June 1986	-0-	-0-	-0-	-0-

SOUTH WEST DISTRICT  
TAMPA

AUG 0 1 1986

D. E. M.



Air



**LAKELAND  
ELECTRIC  
& WATER**

Governor's Energy Partner

D. E. R.

MAR 18 1986

SOUTH WEST DISTRICT  
TAMPA

March 12, 1986

Dan Williams, P.E.  
Department of Environmental Regulation  
Southwest District  
7601 Highway 301, North  
Tampa, Florida 33601-9544

RE: Ambient Air Monitoring - Unit No. 3,  
C.D. McIntosh Power Plant

Dear Mr. Williams:

As required by the conditions of certification under the  
Power Plant Siting Act (Case No. PA-74-06), please find  
enclosed the Ambient Air Monitoring report for SO<sub>2</sub> and  
Particulates, for the fourth quarter of 1985.

If you have any questions concerning the submittal, please  
call me at 687-3636, extension 244.

Sincerely,

G.A. "Bill" Rodriguez  
Environmental Coordinator

GAR/sac

Enclosure

Table 2. City of Lakeland 24-Hour SO<sub>2</sub> Concentrations  
 Statistical Summary  
 October through December 1985 (results in ug/m<sup>3</sup>)

Station Number	Total Observations	Arithmetic Mean	Observed Maximum	Second Highest Concentration	Geometric Standard Deviation
1	14	<3	3	3	1.21
2	13	<3	13	13	1.79

Source: ESE, 1985

Table 4. City of Lakeland 24-Hour TSP Concentrations  
 Statistical Summary  
 October through December, 1985 (results in ug/m<sup>3</sup>)

Station Number	Total Observations	Arithmetic Mean	Observed Maximum	Second Highest Concentration	Geometric Standard Deviation
1	14	28	45	38	1.27
2	10	30	46	40	1.28

Source: ESE, 1985



**LAKELAND  
ELECTRIC  
& WATER**

**Governor's Energy Partner**

February 4, 1986

Department of Environmental Regulation  
Attn: Mr. Bill Brown  
Southwest District  
7601 Highway 301 North  
Tampa, FL 33610

D. E. R.

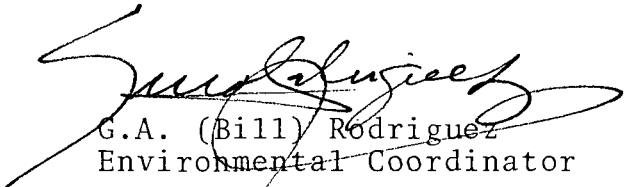
FEB - 5 1986

RE: City of Lakeland, Quarterly Fuel Reports **SOUTHWEST DISTRICT  
TAMPA**

Dear Mr. Brown:

Please find enclosed the fuel reports for the fourth quarter of 1985 for the Larsen Memorial Power Plant, Units 4-7 and the C.D. McIntosh, Jr. Power Plant, Units 1, 2, and 3.

Sincerely,

  
G.A. (Bill) Rodriguez  
Environmental Coordinator

GAR/scb

Enclosures

CITY OF LAKE LAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTELY FUEL REPORT

UNIT/FERMIT NO.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-99003	Oct. 1985	747.6	160.3	2.34
5/A053-99001	" "	19,290.2	2,849.6	2.34
6/A053-102240	" "	24,818.4	1,912.1	2.34
7/A053-102239	" "	29,642.6	3,799.9	2.34
4/A053-99003	Nov. 1985	-0-	-0-	----
5/A053-99001	" "	-0-	-0-	----
6/A053-102240	" "	-0-	-0-	----
7/A053-102239	" "	-0-	-0-	----
4/A053-99003	Dec. 1985	-0-	-0-	----
5/A053-99001	" "	-0-	-0-	----
6/A053-102240	" "	-0-	-0-	----
7/A053-102239	" "	-0-	-0-	----

D. E. R.

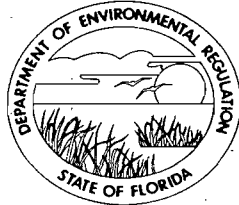
FEB - 5 1986

WEST DISTRICT  
 AREA

CITY OF LAKELAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-76654	Oct. 1985	328,765.7	-0-	-0-	-0-
2/A053-99463	" "	172,771.7	21,653.8	-0-	0.71
3/PA 74-06	" "	-----	-0-	49,605.2	1.43
1/A053-76654	Nov. 1985	68,724.2	-0-	-0-	-0-
2/A053-99463	" "	60,035.8	3,108.4	-0-	0.60
3/PA 74-06	" "	-0-	-0-	74,732.2	1.73
1/A053-76654	Dec. 1985	50,193.2	134.9	-0-	2.41
2/A053-99463	" "	169,083.3	3,913.2	-0-	0.74
3/PA 74-06	" "	-0-	-0-	91,002.9	1.66

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610

813-985-7402  
SunCom - 570-8000

BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

DR. RICHARD D. GARRITY  
DISTRICT MANAGER

March 20, 1986

Mr. G. A. (Bill) Rodriguez  
City of Lakeland  
Department of Electric and Water Utilities  
1000 East Parker Street  
Lakeland, Florida 33801

Re: Procedural Changes for Excess Emission Reports

Dear Mr. Rodriguez:

As you may or may not know, the Department has made commitments to EPA to begin tracking excess emission reports on all NSPS sources requiring installation and operation of continuous emission monitors. As a result, several changes have been made to reporting procedures and must be instituted immediately. All items listed below and marked with an (x) should be addressed immediately. Items not conformed to by the next reporting period could result in trouble for both the Department and your company.

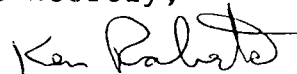
- (x) Send proof of certification for each monitor. This may be either a copy of the certification letter from EPA or DER Tallahassee or a copy of the test report.
- (x) Fill in the "Continuous Emission Monitor Quarterly Report Supplemental Form" for each source and send in with each source quarterly excess emission report. All time is to be in periods of excess emissions. For example, if a  $H_2SO_4$  plant's total operating time for a quarter was 2200 hrs., the Total Source Operation Time (TSOT) would be 733 periods (2200 hrs. x 1 period/3 hrs.). For a power plant with the same operating hours, the TSOT would be 22,000 periods (2200 hrs. x 60 min./hr. x 1 period/6 min.). All excess emissions and monitor downtimes are also reported in periods.
- (x) Send all reports to the Air Compliance Engineer in the SW District Office. This office will forward a copy to Tallahassee. Do not send reports directly to Tallahassee.

Mr. G. A. (Bill) Rodriguez  
Lakeland, Florida 33801

Page Two  
March 20, 1986

Your cooperation in this matter is very much appreciated. If you have questions regarding this matter, please call this office at your convenience.

Sincerely,



Ken Roberts  
Air Compliance Engineer

KMR/js





**LAKELAND  
ELECTRIC  
& WATER**

Governor's Energy Partner

*File  
City of Lakeland  
Lanson*

July 26, 1985

*D. E. A.  
JUL 30 1985  
SOUTH WEST DISTRICT  
TAMPA*

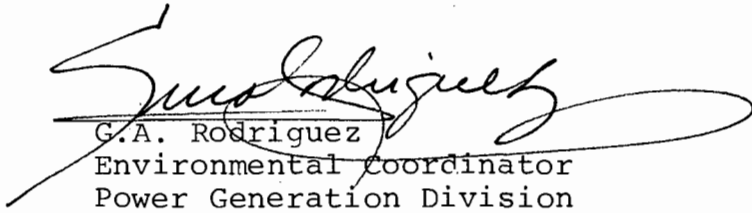
Mr. Bill Brown  
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

RE: City of Lakeland, Quarterly Fuel Reports

Dear Mr. Brown:

Please find enclosed the fuel reports for the second quarter of 1985 for the Larsen Memorial Power Plant Units 4-7 and the C.D. McIntosh, Jr. Power Plant Units 1,2 and 3.

Sincerely,

  
G.A. Rodriguez  
Environmental Coordinator  
Power Generation Division

GAR/sac

Enclosure

CITY OF LAKE LAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/FERMIT NO.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-99003	April 1985	0	0	-
5/A053-99001	April 1985	0	0	-
6/A053-102240	April 1985	0	0	-
7/A053-102239	April 1985	0	0	-
4/A053-99003	May 1985	0	0	-
5/A053-99001	May 1985	0	0	-
6/A053-102240	May 1985	0	0	-
7/A053-102239	May 1985	0	0	-
4/A053-99003	June 1985	361.2	0	-
5/A053-99001	June 1985	561.2	0	-
6/A053-102240	June 1985	893.2	0	-
7/A053-102239	June 1985	15,659.2	259.9	2.14

D. E. R.

JUL 30 1985

SOUTH WEST DISTRICT  
 TAMPA

Best Available Copy

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

D. E.

JUL 30

SOUTH WA.  
TA.

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-76654	April 1985	71,401.9	2,842.3	0	2.45
2/A053-99463	April 1985	238,730.9	1,271.2	0	0.67
3/PA 74-06	April 1985	0	0	48,012.2	1.45
1/A053-76654	May 1985	79,749.5	196.4	0	2.27
2/A053-99463	May 1985	170,030.9	4,054.9	0	0.66
3/PA 74-06	May 1985	0	0	93,484.9	1.66
1/A053-76654	June 1985	149,498.9	5,324.7	0	2.47
2/A053-99463	June 1985	220,171.7	1,865.8	0	0.73
3/PA 74-06	June 1985	0	0	94,017.6	1.65

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**SOUTHWEST DISTRICT**

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

RICHARD D. GARRITY, PH.D.  
DISTRICT MANAGER

DER  
FEB 25 1985  
SOUTH WEST DISTRICT  
TAMPA

**ANNUAL OPERATION REPORT FORM FOR AIR EMISSIONS SOURCES**

For each permitted emission point, please submit a separate report for calendar year 1984 prior to March 1st of the following year.

**I GENERAL INFORMATION**

1. Source Name: City of Lakeland, Department of Electric & Water Utilities
2. Permit Number: A053-28468
3. Source Address: 3030 E. Lake Parker Drive, Lakeland, Florida
4. Description of Source: Unit #2, McIntosh Plant, 115 MW

**II ACTUAL OPERATING HOURS:** 3871.0 hrs/day ~~days~~        days/wk        wks/yr

**III RAW MATERIAL INPUT PROCESS WEIGHT:** (List separately all materials put into process and specify applicable units if other than tons/yr)

Raw Material	Input Process Weight
N/A	N/A
	tons/yr
	tons/yr
	tons/yr
	tons/yr
	tons/yr

**IV PRODUCT OUTPUT** (Specify applicable units)

N/A

V TOTAL FUEL USAGE including standby fuels. If fuel is oil, specify type and sulfur content (e.g., No. 6 oil with 1% S).

691.9 MBT  
406.89 MBT  
2551.1 10<sup>6</sup> cubic feet Natural Gas \_\_\_\_\_ 10<sup>3</sup> Kerosene  
1575.0 10<sup>3</sup> gallons #6 Oil, 0.7 %S \_\_\_\_\_ tons Coal  
\_\_\_\_\_ 10<sup>3</sup> gallons Propane \_\_\_\_\_ tons Carbonaceous  
\_\_\_\_\_ 10<sup>6</sup> Black Liquor Solids \_\_\_\_\_ tons Refuse  
Other (Specify type and units) \_\_\_\_\_

VI EMISSION RATE(S) (tons/yr)

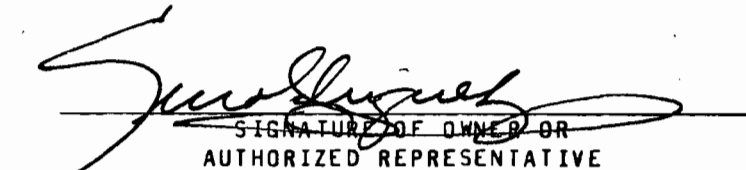
4.0247 7.79 Particulates 45.10 87.3 Sulfur Dioxide \_\_\_\_\_ Total Reduced Sulfur  
\_\_\_\_\_ Nitrogen Oxide \_\_\_\_\_ Carbon Monoxide \_\_\_\_\_ Fluoride  
\_\_\_\_\_ Hydrocarbon Other (Specify type and units) \_\_\_\_\_

VII METHOD OF CALCULATING EMISSION RATES (e.g., use of fuel and materials balance, emission factors drawn from AP 42, etc.)

AP-42, Fuel analysis, Fuel usage, Stack test data.

VIII CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

  
\_\_\_\_\_  
SIGNATURE OF OWNER OR  
AUTHORIZED REPRESENTATIVE

G.A. Rodriguez, Environmental Coord.  
\_\_\_\_\_  
TYPED NAME AND TITLE

February 22, 1985  
\_\_\_\_\_  
DATE



**LAKELAND  
ELECTRIC  
& WATER**

Governor's Energy Partner

D. E. R.

OCT 26 1984

SOUTH WEST DISTRICT  
TAMPA

October 23, 1984

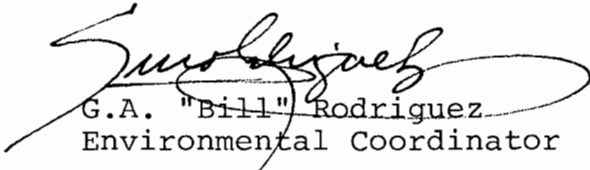
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

ATTENTION: Mr. Bill Brown

Dear Mr. Brown:

Enclosed you will find the fuel reports for the third quarter of 1984 for the C.D. McIntosh, Jr. Power Plant, Units 1, 2, and 3. The Larsen Plant was not operational this quarter.

Sincerely,

  
G.A. "Bill" Rodriguez  
Environmental Coordinator

GAR/rls

Enclosure



# LAKELAND ELECTRIC & WATER

Governor's Energy Partner

February 8, 1985

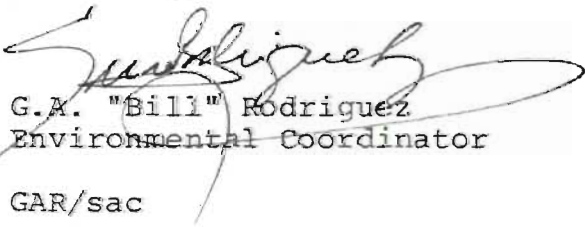
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

ATTENTION: Mr. Bill Brown

Dear Mr. Brown:

Enclosed you will find the fuel reports for the fourth quarter of 1984 for the C.D. McIntosh, Jr. Power Plant, Units 1, 2, and 3. The Larsen Plant Unit No. 7 was fired only for test purposes.

Sincerely,

  
G.A. "Bill" Rodriguez  
Environmental Coordinator

GAR/sac

Enclosure

D. E. R.

FEB 11 1985

SOUTH WEST DISTRICT  
TAMPA

10/4

file

INSPECTION REPORT EXECUTIVE SUMMARY

PLANT NAME Hardaway Constructors NEDS 0237 DATE/TIME 2 April 1984 0900

PLANT LOCATION Hardaway Road on Port Tampa # OF NEDS POINTS ( 3 )

PROCESS DESCRIPTION concrete mixing plant, with two cement silos and one fly ash bin

COMPLIANCE VERIFICATION ENFORCEMENT

( )

PERMIT REVIEW OTHER

(X)  
( )

PERSONS CONTACTED-TITLE

Roger C Martin PE, vice president

NEDS POINTS CHECKED

3

NEDS POINTS IN COMPLIANCE

3

NEDS POINTS IN VIOLATION

0

SUMMARY OF FINDINGS

No deficiencies noted. Aggregate piles are being water sprayed. No VE from batching process. Original plant has been dismantled.

INSPECTION COMMENTS FOR APIS (LIMIT 50 SPACES)

INSPECTOR'S SIGNATURE

Anthony A. Aguirre



CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-76654	Oct. 1984	68,210.6	15,828.7	-0-	2.31
2/A053-28468	Oct. 1984	324,495.1	-0-	-0-	0.72
3/PA 74-06	Oct. 1984	-0-	-0-	35.8	2.01
1/A053-76654	Nov. 1984	98,010.6	475.5	-0-	2.50
2/A053-28468	Nov. 1984	66,218.4	-0-	-0-	-0-
3/PA 74-06	Nov. 1984	-0-	-0-	76.7	1.93
1/A053-76654	Dec. 1984	13,673.8	-0-	-0-	-0-
2/A053-28468	Dec. 1984	37,769.9	-0-	-0-	-0-
3/PA 74-06	Dec. 1984	-0-	-0-	89.6	1.73

D. E. R.

FEB 11 1985

SOUTH WEST DISTRICT  
TAMPA

CITY OF LAKE LAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-28469	Oct. 1984	0	0	-
5/A053-26809	Oct. 1984	0	0	-
6/A053-26810	Oct. 1984	0	0	-
7/A053-26811	Oct. 1984	1183.5	0	-
4/A053-28469	Nov. 1984	0	0	-
5/A053-26809	Nov. 1984	0	0	-
6/A053-26810	Nov. 1984	0	0	-
7/A053-26811	Nov. 1984	0	0	-
4/A053-28469	Dec. 1984	0	0	-
5/A053-26809	Dec. 1984	0	0	-
6/A053-26810	Dec. 1984	0	0	-
7/A053-26811	Dec. 1984	0	0	-

D. E. R.

FEB 1 1 1985

SOUTH WEST DISTRICT  
TAMPA



**LAKELAND  
ELECTRIC  
& WATER**

**Governor's Energy Partner**

D. E. R.

FEB 2 1984

January 31, 1984

SOUTH WEST DISTRICT  
TAMPA

*File - Lee Co. - HW  
Lakeland, City of  
General*

Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

Attention: Mr. Bill Brown

Dear Mr. Brown:

Re: City of Lakeland, Quarterly Fuel Reports

Please find enclosed, the fuel reports for the fourth quarter of 1983 for the Larsen Memorial Power Plant, Units 4-7 and the C.D. McIntosh, Jr. Power Plant, Units 1, 2 and 3.

Sincerely,

*G.A. Rodriguez*  
G.A. Rodriguez  
Environmental Coordinator

GAR/rlp

Enclosures

CITY OF LAKE LAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-15970	October 1983	455,201.9	14,947.5	0	2.38
2/A053-28468	October 1983	0	35,758.4	0	0.70
3/PA 74-06	October 1983	0	0	0.19	2.16
1/A053-15970	November 1983	183,514.6	243.2	0	2.33
2/A053-28468	November 1983	0	18,787.2	0	0.72
3/PA 74-06	November 1983	0	0	55.0	1.90
1/A053-15970	December 1983	93,704.9	8,973.4	0	2.35
2/A053-28468	December 1983	0	51.8	0	0.72
3/PA 74-06	December 1983	0	0	77.5	2.18

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-28469	October 1983	0	0	--
5/A053-26809	October 1983	0	0	--
6/A053-26810	October 1983	0	0	--
7/A053-26811	October 1983	113,360.2	0	--
4/A053-28469	November 1983	0	0	--
5/A053-26809	November 1983	68,118.4	0	--
6/A053-26810	November 1983	0	0	--
7/A053-26811	November 1983	18,766.9	0	--
4/A053-28469	December 1983	11,459.2	1101.9	2.36
5/A053-26809	December 1983	45,032.0	1439.0	2.36
6/A053-26810	December 1983	24,526.2	1245.8	2.36
7/A053-26811	December 1983	120,019.4	0	--

*Air*  
File  
*W*

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**SOUTHWEST DISTRICT**

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

October 24, 1983

Ronald W. Tomlin  
City of Lakeland  
P.O. Box 368  
Lakeland, FL 33802

Re: Compliance Verification Inspection

Dear Mr. Tomlin:

Enclosed is a copy of the annual compliance inspection report required for all major sources.

Pending results of the stack test, your plant is apparently in compliance with Chapters 17-2 and 17-4, Florida Administrative Code.

Your cooperation during the inspection of the plant is greatly appreciated.

Sincerely,

Douglas S. Bramlett  
Enforcement Section

DSB/err

cc: Dan Williams, P.E. ✓

Enclosure



COMPLIANCE VERIFICATION INSPECTION

City of Lakeland  
(C.D. McIntosh Plant)

Polk County

NEDS NO.: 0004-01 through 0004-05  
PERMIT NO.: AO53-15970, AO53-18468, AO53-74766, AO53-74767,  
AO53-74768 and DER Case #PA-74-06

Date of Inspection: September 23, 1983

---

The C.D. McIntosh electric generating plant is located on the north shore of Lake Parker, east of Lakeland. This plant was inspected by Louis Fernandez of the DER Southwest District Office. Plant contact was Mike Gieger.

This facility consists of Unit 1, an oil/gas fired steam generating unit; Unit 2, an oil fired steam generator which is in the process of converting to natural gas for a fuel and Unit 3 which is designed to burn coal and processed solid waste but due to operating problems only burns coal. Peaking units consist of two fired by fuel oil and one fired by natural gas.

Units 1 and 2 are uncontrolled for emissions, but Unit 3 utilizes an electrostatic precipitator and a desulfurization scrubber to control particulate and sulfur dioxide emissions.

During the inspection, Units 1 and 3 were operating with visible emissions of less than 5% opacity and Unit 2 was down.

Previous stack tests on these units have shown compliance with air quality standards. SO<sub>2</sub> is calculated from fuel analysis.

This plant is apparently in compliance with Chapter 17-2 and 17-4, Florida Administrative Code.

LJF/err

COMPLIANCE VERIFICATION INSPECTION

City of Lakeland  
Larsen Memorial Electric Plant

Polk County

NEDS NO.: 0003-01 through 0003-07

PERMIT NO.: A053-28469, A053-26809, A053-28610, A053-26811, A053-70927

Date of Inspection: September 23, 1983

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The Larsen Memorial Electric Plant is located on the south side of Lake Parker off Highway 92 East in Lakeland, Florida. This plant was inspected by Louis Fernandez of the DER Southwest District Office. Plant contact was Mike Gieger.

This plant consists of seven units fired by oil or natural gas. Units 1-3 are gas turbine (peaking units). Unit 4 is a B&W boiler rated at 20 MW, Unit 5&6 are B&W boilers rated at 25 MW and Unit 7 is a Foster Wheeler boiler rated at 50 MW. Recently, units have been fired by natural gas and as needed only. An extended cold shutdown of this plant is expected by January 1984.

The plant was not in operation on this date.

PERMITS:

Units 1-3	A053-70828	Expires 8/29/88
Unit 4	A053-28469	Expires 5/1/85
Unit 5	A053-26809	Expires 3/20/85
Unit 6	A053-26810	Expires 3/20/85
Unit 7	A053-26811	Expires 3/20/85

This plant is apparently in compliance with Chapter 17-2 and 17-4, Florida Administrative Code.

LJF/err



**LAKELAND  
ELECTRIC  
& WATER**

Governor's Energy Partner

October 24, 1983

Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

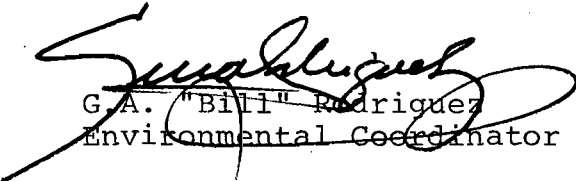
Attention: Mr. Bill Brown

Dear Mr. Brown:

Re: City of Lakeland, Quarterly Fuel Reports

Please find enclosed, the fuel reports for the third quarter of 1983 for the Larsen Memorial Power Plant, Units 4-7 and the C.D. McIntosh, Jr. Power Plant, Units 1, 2 and 3.

Sincerely,

  
G.A. "Bill" Rodriguez  
Environmental Coordinator

GAR/rp

Enclosures

**D.E.R.**  
OCT 27 1983  
SOUTHWEST DISTRICT  
TAMPA

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YR.	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-28469	JULY 1983	---	---	---
5/A053-26809	JULY 1983	59,708.0	2,262.9	2.45
6/A053-26810	JULY 1983	25,960.0	---	---
7/A053-26811	JULY 1983	114,025.2	1,328.9	2.45
4/A053-28469	AUGUST 1983	---	---	---
5/A053-26809	AUGUST 1983	23,062.0	---	---
6/A053-26810	AUGUST 1983	21,022.0	313.1	2.46
7/A053-26811	AUGUST 1983	112,799.0	52.6	2.46
4/A053-28469	SEPT. 1983	12,543.8	---	---
5/A053-26809	SEPT. 1983	70,184.6	---	---
6/A053-26810	SEPT. 1983	56,351.0	---	---
7/A053-26811	SEPT. 1983	72,424.5	2,799.2	2.48

**D.E.R.**

OCT 27 1983

SOUTHWEST DISTRICT  
TAMPA

CITY OF LAKELAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS CF x 1000	NO. 6 OIL (bbls)	COAL TONS x 1000	SULFUR (%)
1/A053-15970	JULY 1983	477,153.0	1,300.9	---	2.46
2/A053-28468	JULY 1983	---	25,373.4	---	0.67
3/PA 74-06	JULY 1983	---	---	80.15	2.08
1/A053-15970	AUGUST 1983	495,540.0	9,276.2	---	2.40
2/A053-28468	AUGUST 1983	---	29,548.9	---	0.68
3/PA 74-06	AUGUST 1983	---	---	97.03	2.14
1/A053-15970	SEPT. 1983	346,966.0	24,661.6	---	2.45
2/A053-28468	SEPT. 1983	---	18,359.9	---	0.69
3/PA 74-06	SEPT. 1983	---	---	94.16	1.94

D.I.E.R.  
 OCT 22 1983  
 SOUTHWEST DISTRICT  
 TAMPA



**LAKELAND  
ELECTRIC  
& WATER**

**Governor's Energy Partner**

**CORPORATE PLANNING**

July 27, 1983

Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

Attn: Mr. Bill Brown

Re: City of Lakeland, Quarterly Fuel Reports

Dear Mr. Brown:

Please find enclosed the fuel reports for the second quarter of 1983 for the Larsen Memorial Power Plant, Units 4-7 and the C. D. McIntosh, Jr. Power Plant, Units 1, 2 and 3.

Sincerely

G. A. (Bill) Rodriguez  
Environmental Coordinator  
Department of Electric & Water Utilities

GAR/tk

Enclosure

**D.E.R.**  
JUL 29 1983  
SOUTHWEST DISTRICT  
TAMPA

CITY OF LAKE LAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YR.	NATURAL GAS MCF	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-28469	April 1983	0	0	-
5/A053-26809	" "	0	0	-
6/A053-26810	" "	0	0	-
7/A053-26811	" "	0	0	-
4/A053-28469	May 1983	8.7	0	-
5/A053-26809	" "	86.4	0	-
6/A053-26810	" "	86.4	0	-
7/A053-26811	" "	8,450.5	0	-
4/A053-28469	June 1983	0	0	-
5/A053-26809	" "	0	0	-
6/A053-26810	" "	3,061.2	0	-
7/A053-26811	" "	166,977.7	573.5	2.38

**D.E.R.**  
**JUL 29 1983**  
**SOUTHWEST DISTRICT**  
**TAMPA**

CITY OF LAKELAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS MCF	NO. 6 OIL (bbls)	COAL (TONS x 10 <sup>3</sup> )	SULFUR (%)
1/A053-15970	April 1983	481,974.8	39.7	-	2.35
2/A053-28468	" "	-	12,733.1	-	0.62
3/PA 74-06	" "	-	-	47.5	2.26
1/A053-15970	May 1983	491,006.8	960.4	-	2.46
2/A053-28468	" "	-	5,484.9	-	0.70
3/PA 74-06	" "	-	-	88.7	2.02
1/A053-15970	June 1983	436,717.5	11,358.9	-	2.46
2/A053-28468	" "	-	90.3	-	0.66
3/PA 74-06	" "	-	-	67.7	2.29



STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

August 10, 1983

Mr. G. A. Rodriguez  
Environmental Coordinator  
City of Lakeland Department of  
Electric & Water Utilities  
Lakeland, Florida 33801

Dear Mr. Rodriguez:

I have received a response from EPA regarding your questions concerning continuous monitoring. As promised, I am enclosing a copy of the response for your review.

If you have any further questions, please call me at  
(904)488-1344.

Sincerely,

E. F. Palagyi, Engineer  
Bureau of Air Quality Management

EP/bjm

cc: DER Southwest District Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

JUL 25 1983

REF: 4AW-AM

Mr. C. H. Fancy  
Deputy Chief  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER  
AUG 1 1983  
BAQM

Re: C. D. McIntosh Power Plant, Lakeland Utilities,  
Lakeland, Florida

Dear Mr. Fancy:

This letter is in response to your letter of March 4, 1983, which we received on April 28, 1983. In your letter you asked whether a fuel analysis report was an acceptable substitute for the SO<sub>2</sub> continuous monitor report (of excess emissions) for a steam generating unit regulated under 40 CFR 60 - Subpart D.

A review of our records indicates that an SO<sub>2</sub> continuous emission monitor had been installed and certified on the McIntosh Plant in 1977 and we see no reason why this monitor should be abandoned at this time. However, if the company feels there is an equivalent alternative to continuous emissions monitoring, they can formally petition the Administrator (and FL-DER) for approval of such an alternative procedure as cited in 40 CFR 60.13 (i).

Concerning the following issues raised in your letter, we offer the following comments to each issue.

- A. The C. D. McIntosh Plant does not have a FGD unit and therefore is exempt from continuous monitoring per 40 CFR 60.45.

Comment: 40 CFR 60.45 (b)(2) states as follows: "For a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis under paragraph (d) of this section."

EPA has not published guidance or methodology under paragraph (d) cited above, therefore there are no standard

acceptable fuel sampling techniques available for implementation in accordance with 40 CFR 60.45 (b)(2). In light of the above, it has been the policy of this Regional Office to require installation and certification of an SO<sub>2</sub> continuous emissions monitor unless an alternate plan has been submitted and approved prior to start-up of an affected facility.

- B. The boiler fired only low sulfur oil and the SO<sub>2</sub> emission limit could not be exceeded, even if all of the sulfur was converted to sulfur dioxide.

Comment: This information is based on historical data and the question remains as to what assurance this will be true in the future. The purpose of a continuous emission monitor is to provide a record of actual emissions. A vigorous as-fired fuel sampling method could possibly provide this same information, but would have to be evaluated. Certainly this historic information together with existing and future fuel contract information and a detailed description of the fuel sampling and analysis method should be outlined in detail in any alternative procedures request under 40 CFR 60.13(i).

- C. "Other" utilities of similar size were allowed to use fuel sampling instead of continuous SO<sub>2</sub> monitoring. "Other" was not specified.

Comment: We are not aware of any fuel sampling and analysis plan approved by this Regional Office for any utility regulated by 40 CFR 60 - Subpart D.

If you can be more specific as to "other" we would be able to investigate this issue further.

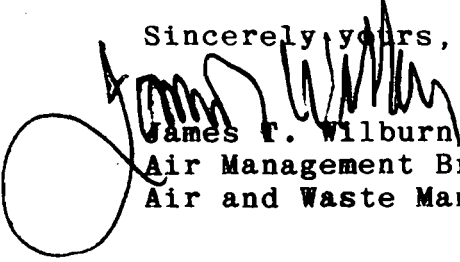
- D. The amount of time required to prepare the excess emissions report was not justified for reason B.

Comment: EPA considered this issue at the time the regulation was promulgated and determined that excess emission reporting is justified for assessment of continuing compliance. Furthermore, EPA staff that observed the monitor certification procedures at the McIntosh Plant indicate that a computer system is utilized in conjunction with the SO<sub>2</sub> monitor to reduce the data and report emissions in units of the standard. Therefore we do not consider the excess emission reporting requirement to be burdensome.

In summary, although we prefer the utilization of continuous emissions monitoring systems, there are provisions available to request alternative procedures and any detailed request submitted by a utility would receive close scrutiny by both your agency and EPA.

If we can be of further assistance in this matter, please call Brian Beals or Richard DuBose at 404/881-4901.

Sincerely yours,



James F. Wilburn  
Air Management Branch  
Air and Waste Management Division



**LAKELAND  
ELECTRIC  
& WATER**

**Governor's Energy Partner**

**CORPORATE PLANNING**

*file  
Tolk Co. - AP  
City of Lakeland  
General*

May 4, 1983

Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Fl 33610

Attn: Mr. Bill Brown

Re: City of Lakeland, Quarterly Fuel Reports

Dear Mr. Brown:

Please find enclosed the fuel reports for the first quarter of 1983 for the Larsen Memorial Power Plant, Units 4-7 and the C.D. McIntosh, Jr. Power Plant, Units 1, 2 and 3.

Sincerely,

G. A. (Bill) Rodriguez  
Environmental Coordinator  
Dept. of Electric & Water Utilities

GAR:lw

enc.

**D.E.R.**

MAY 9 1983

**SOUTHWEST DISTRICT  
TAMPA**

CITY OF LAKELAND  
DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
LARSEN MEMORIAL POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YR.	NATURAL GAS MCF	NO. 6 OIL (bbls)	SULFUR (%)
4/A053-28469	Jan 1983	16,559.8	-0-	-0-
5/A053-26809	" "	80,039.0	2,366.3	2.37
6/A053-26810	" "	57,039.3	1,475.4	2.37
7/A053-26811	" "	153,024.8	5,413.9	2.37
4/A053-28469	Feb 1983	23,322.8	-0-	-0-
5/A053-26809	" "	60,116.5	68.4	2.40
6/A053-26810	" "	29,957.8	-0-	-0-
7/A053-26811	" "	87,661.5	1,071.6	2.40
4/A053-28469	March 1983	23,822.3	-0-	-0-
5/A053-26809	" "	30,218.4	600.3	2.33
6/A053-26810	" "	65,289.3	45.5	2.33
7/A053-26811	" "	101,242.7	322.4	2.33

D.E.R.

MAY 9 1983

SOUTHWEST DISTRICT  
TAMPA

CITY OF LAKELAND  
 DEPARTMENT OF ELECTRIC AND WATER UTILITIES  
C.D. McINTOSH, JR. POWER PLANT  
QUARTERLY FUEL REPORT

UNIT/PERMIT NO.	MONTH/YEAR	NATURAL GAS MCF	NO. 6 OIL (bbls)	COAL (TONS x 10 <sup>3</sup> )	SULFUR (%)
1/A053-15970	Jan 1983	280,226.6	10,437.5	-0-	2.32
2/A053-28468	" "	-0-	7,048.9	-0-	0.66
3/PA 74-06	" "	-0-	-0-	78,144.9	2.0
1/A053-15970	Feb 1983	242,335.4	3,058.2	-0-	2.37
2/A053-28468	" "	-0-	8,625.4	-0-	0.60
3/PA 74-06	" "	-0-	-0-	78,917.9	2.0
1/A053-15970	March 1983	317,458.3	10,754.1	-0-	2.33
2/A053-28468	" "	-0-	1,681.3	-0-	0.66
3/PA 74-06	March "	-0-	-0-	90,144.0	2.0