



Florida
Department of
Environmental Protection

Jeb Bush
Governor

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

David Struhs
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 4/29/02

TO: Clarence Troxell

PHONE: _____

FAX: _____

FROM: A. Liner

PHONE: _____

Division of Air Resources Management

FAX: 850.922.6979

RE: FPL Manatee

CC: _____

Total number of pages including cover sheet: 5

Message

Mr Troxell. Here is your
public records request on
FPL Manatee Unit 1+2 Gas Project.
We have no application yet. As you
requested, we will add your name or
your group's name to correspondence
we send out on this project. A Liner

If there are any problems with this fax transmittal, please call the above phone number.

"Protect, Conserve, and Manage Florida's Environmental and Natural Resources"

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DRAFT

Draft

April 23, 2002

A. A. Linero, P.E.
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Manatee Plant – Title V Permit No. 0810010-001-AV
Addition of Natural Gas as a Permitted Fuel

Dear Mr. Linero:

A new natural gas pipeline is currently being constructed near Florida Power & Light Company's (FPL's) Manatee Plant. We therefore have the opportunity to add natural gas as a fuel for the two existing 800-megawatt (nominal) units. While these units, which commenced operation in 1976-1977, burn No. 6 residual fuel oil (with a maximum sulfur content of 1 percent) exclusively, they are capable of firing natural gas. With natural gas' lower emission rates, the addition of gas as a fuel for these units would be environmentally beneficial, as set forth more fully below. Because we do not project that our annual emissions will increase as a result of the addition of natural gas, we would like to pursue a revision to our Title V permit to include natural gas. With this letter, we are seeking the Department's concurrence in that approach and requesting that the Title V permit be revised accordingly.

Physical or Operational Change—We understand that the Department considers the addition of a new fuel to be a physical or operational change. Such a change would constitute a "modification" and require a construction permit only if it would cause a net emissions increase (and is not otherwise exempt). A net emissions increase for existing electric utility units is determined based on a comparison of recent past actual annual emissions and future projected or "representative actual" annual emissions. For the reasons discussed below, we project that the addition of gas would not cause a net emissions increase at the Manatee Plant, and it would therefore not be considered a modification.

Short-Term Rates—As you would expect, the short-term emission rates are lower for all of the following pollutants while firing natural gas than while firing fuel oil, in both pounds per hour and pounds per million British thermal units (lb/mmBtu), as shown in the following table.

Manatee Units 1 and 2		
Short-Term Emission Rate Comparison¹		
<i>Pounds Per Hour</i>		
<i>Pounds Per Million Btu</i>		
Pollutant	Fuel Oil	Natural Gas
Sulfur Dioxide	9,183	3
	1.06	0.0006
Particulate Matter (PM/PM10)	719	10
	0.08	0.002
Nitrogen Oxides	2,545	1,152
	0.29	0.20
Carbon Monoxide	5,450	2,608
	0.63	0.46
Volatile Organic Compounds	44	17
	0.005	0.003

In addition to these regulated air pollutants, the emissions of carbon dioxide are also lower while firing natural gas than while firing fuel oil, which is environmentally beneficial.

Furthermore, to the extent that natural gas is co-fired with fuel oil, the emissions would be reduced in proportion to the ratio of gas to oil, and thus co-firing is also an environmentally beneficial method of operation.

Capacity Factor—Regardless of whether natural gas is added as a potential fuel for the existing Manatee units, the FPL resource planning group's projections indicate that the annual utilization rate of the units is expected to stay within the same range over the next five years as it has experienced within the past five years (a capacity factor of approximately 20 to 40 percent). The addition of natural gas will not cause the units' utilization rate to increase, and we project that the annual capacity factor for the units in the future will not exceed the recent two-year average for 2000 and 2001.

Annual Emissions—Because the short-term rates are lower while firing natural gas than while firing fuel oil, only an increase in utilization should cause an increase in annual emissions. To provide the Department with assurances that the addition of natural gas does not cause an increase in actual annual emissions, we will provide the Department with annual utilization data for a period of five years following the addition of natural gas at Manatee Units 1 and 2 (calendar years 2003-2007). This approach was suggested by the U.S. Environmental Protection Agency several years ago, when the definition of representative actual annual emissions was first promulgated. See 57 Fed. Reg. 32314, 32325 (July 21, 1992). If the annual utilization data were to indicate an increase in utilization compared to the baseline period (2000-2001), we would then provide the Department with emissions data and other supplemental information, as appropriate, to demonstrate whether the use of natural gas caused an annual emissions increase.

¹ The basis for these short-term emission rates is set forth in Attachment A.

A.A. Linero, P.E.
Department of Environmental Protection
April 23, 2002
Page 3

Title V Permit Amendment—We respectfully request that the Department amend the Manatee Plant's Title V permit to authorize the use of natural gas as a fuel for Units 1 and 2. The appropriate pages from the Title V permit application are provided as Attachment "B," along with a Professional Engineer's certificate and the Responsible Official's certificate.

Thank you for consideration of our request. Because we would like to take advantage of an upcoming outage to accomplish the natural gas addition at Manatee Units 1 and 2, we would appreciate the Department's prompt processing of the attached application for permit amendment. If you have any questions, need any additional information, or would like to schedule a meeting to discuss this matter, please contact me at (941) 776-5211.

Sincerely,

Paul Plotkin
Manatee Plant General Manager

cc: Jerry Kissel, Southwest District Office, DEP
Tom Murray, Manatee County Air Quality Management Division

ATTACHMENT "A"

The short-term emission rates are based upon the following:

Fuel Oil Data

- The SO₂, NO_x, and CO₂ emission rates are EPA Scorecard values, which are CEM based. The Scorecard values are calculated from hourly CEM heat input and hourly CEM emissions data for each of the three pollutants.
- Particulate Matter and Volatile Organic Compounds emission rates are based on EPA AP-42 Emission Factors.
- CO emission rate is based on emissions test data.
- Full load heat input for oil is 8650 MMBtu/hr.

Natural Gas Data

Because natural gas has yet to be fired in these boilers;

- AP-42 emission factors were used to calculate the emission rate for SO₂, Particulate Matter, and Volatile Organic Compounds.
- NO_x data is based upon the burner manufacturer's predicted performance.
- Carbon monoxide data is based upon the burner manufacturer's predicted performance.
- Full load heat input for gas is 5670 MMBtu/hr.

BEST AVAILABLE COPY

HERE'S THE FAX!!!TO: Al LincoCOMPANY: DEPT.FAX #: 1-850-922-6979FROM: ClarenceDATE: 6/25/02# OF PAGES INCLUDING COVER SHEET: 5

COMMENTS:

Clarence

IF ALL PAGES ARE NOT RECEIVED, PLEASE CONTACT CLARENCE TROXELL
AS SOON AS POSSIBLE:

FAX NUMBER: (941) 776-2047

**THE FLORIDA POWER AND LIGHT
POWER PLANT – PARRISH, FL**

PRESENTED BY CLARENCE G. TROXELL

APRIL 24, 2002

BEST AVAILABLE COPY**THE FLORIDA POWER AND LIGHT POWER PLANT - PARRISH, FL**

During the 1990's Florida Power and Light (FPL) vehemently and unabashedly endeavored to increase the amount of air pollution at the FPL Power plant in Parrish (Manatee County). FPL did not succeed in their attempt to bring Orimulsion into the area. Remember, Orimulsion was that manufactured fuel from Venezuela dubbed, "the dirtiest fuel in the world." FPL introduced us to this fuel in May, 1993. It is cheap! FPL did not spare the horses. FPL spent millions of dollars in a massive lobbying effort and lost.

FPL got the Florida Department of Environmental Protection (FDEP) to approve the burning of Orimulsion. Because of the perseverance of many individuals, environmental groups, a few elected officials and the terrific universal opposition of the news media, Orimulsion was defeated. Now the time has come whereby a similar effort must be made again, this time to reduce stack pollution at the Manatee plant. It's time to clean up this situation!

We've been in contact with the Selective Catalytic Reduction (SCR) Committee of the Institute of Clean Air Companies, Inc. (ICAC) located in Washington, DC. There are approximately fifty (50) members including well-recognized names as: Englehard, Corning, Siemens, 3M, Babcox and Wilcox, and Entropy. Entropy performed the Orimulsion tests for FPL at their Sanford plant. Yet, FPL did nothing about the use of selective catalytic reduction (SCR) control of NOx emissions at the Manatee Power Plant.

As of 1994, over 500 sources have used SCRs worldwide. In their 1994 paper, ICAC states:

"Perceived high cost has been an impediment to the adoption of SCR in the U.S. Given a large and growing installed base and the increasing tendency of owners and operators of regulated units to choose SCR, authorities with extensive NOx control experience have concluded that SCR technology is proven, safe, and economical now." and "emissions reductions of greater than 90% are common with SCR, although this technology may be used economically for lower removal efficiencies as well."

At the February, 2002 meeting of the Parish Civic Association, the representative of FPL stated that control equipment does 'not earn money.'

It is our understanding that every teacher in the Manatee County school system has a list of students who have a chronic ailment. The list includes asthmatics. It does not include all asthmatics; only those names submitted by the parents. There are others. And, there are the elderly who are prone to respiratory ailments.

If the amount of NOx in the atmosphere can be reduced to alleviate the problem, isn't that worthwhile or must we protect FPL's profits before we consider public health?

When FPL brought Orimulsion into the picture in 1993, the NOx emissions at the Manatee plant were 7,318 tons per year (tpy). FPL told us that figure would become 17,000 tpy and, that according to government regulations that figure could be raised to 22,000 tpy. Obviously, that initiated a lot of opposition. Thankfully, Orimulsion failed. But, FPL has told us in the year 2001 the NOx emissions at the Manatee plant were 9,143 tons. Cause: their system load went up. I'm glad! FPL is in business to make a buck. But, does that mean that they must squeeze out every penny for profit at the detriment to the health of our citizens. I hope not!

At issue today is the EPA's so-called "new source review" regulations. This is meant primarily for old coal-fired plants. The industry is referring to this as grandfathered, i.e. exempt from the "new source review." And, FPL is saying the same thing for the old oil-fired plants. During a siting procedure, it is our understanding that the "public good" can be taken into account in rendering a decision not just the legal aspects.

In a report by the Florida Gas Transmission Company in the late 90's, it is stated that converting from oil to natural gas at the Fort Meyers station will reduce the amount of NOx by 96.4 percent and the amount of SO2 by 99.9 percent. It can be done; let's hear it for Manatee. There's no reason not to install proper control equipment. As ICAC states in the last paragraph of their November 1997 report:

"Finally, suppliers are using financial innovations to help users of SCR. One potential impediment to installation of an SCR system is the requirement that

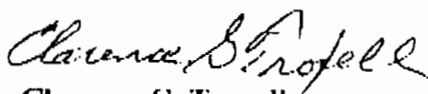
the user commit capital funds. Suppliers are now offering to provide SCR through a build-own operate-maintain (BOOM) program. In BOOM, the supplier finances, owns, and operates the SCR system, thus avoiding a capital expenditure by the user. The user of the SCR system merely pays an annual fee for NOx control, thus converting a capital cost to an operating cost."

It's time. The Florida Power and Light plant in Manatee should be shut down and the proper control equipment be installed. When this equipment is installed, only then should the plant be reopened.

If we can't get anybody's attention now, then we must do it at the ballot box. That's been done before and successfully. It is suggested that you write to:

Governor Jeb Bush
The Capitol
Tallahassee, FL 32399-0001
Phone: 1-850-458-4441
E-mail: jeb@jeb.org

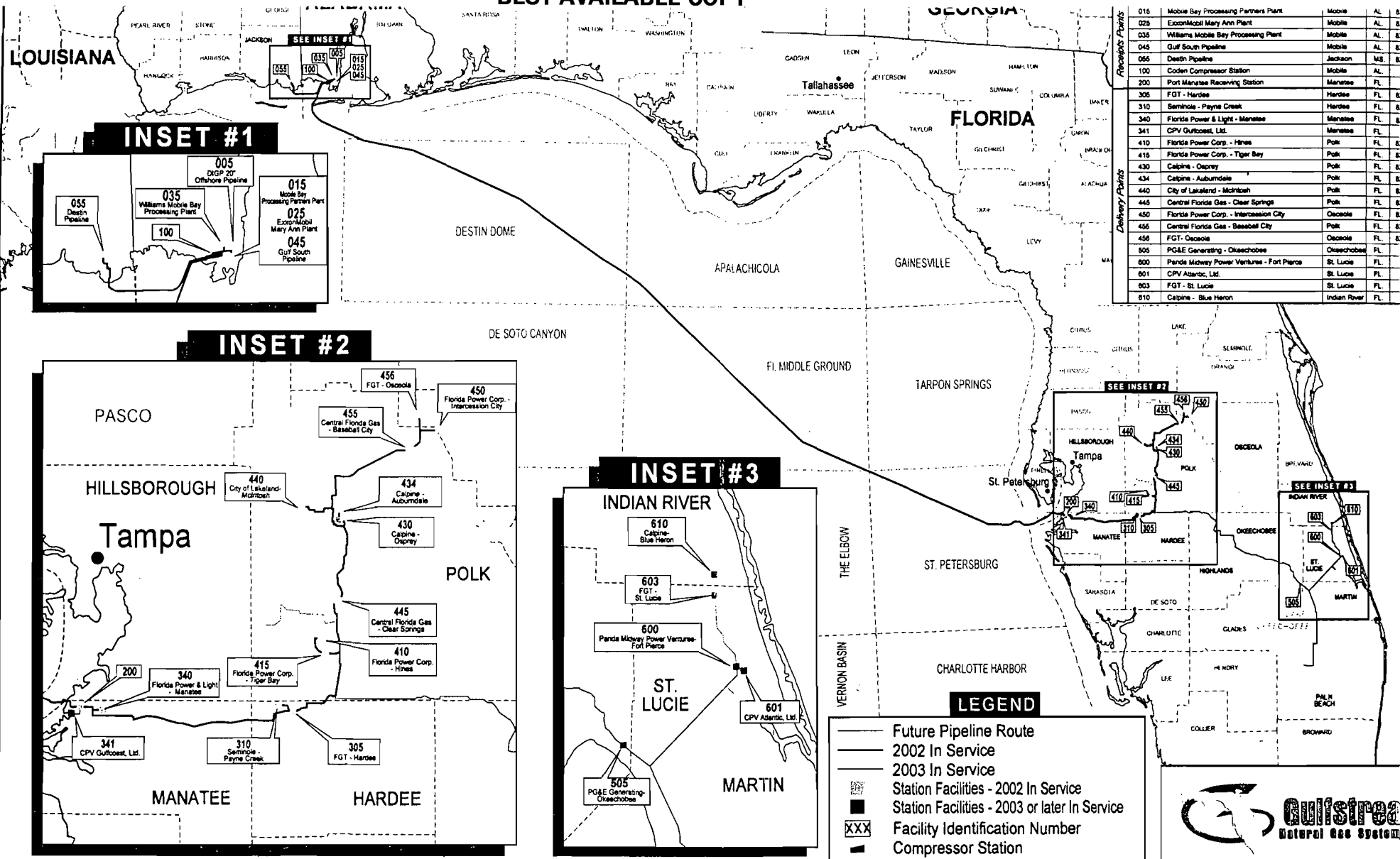
Letting the governor, candidates, and office holders know how you feel is most important.



Clarence C. Troxell
3321 Lakeside Circle
Parrish, FL 34219
Phone: (941) 776-2047
E-mail eliu46fl@aol.com

Author's Credentials

B. of Eng.-Yale University
M.S. - Stevens Institute of Technology
Worked for Public Service E&G (New Jersey) for 40 years
Member of Manatee County Republican Executive Committee
Co-founder of Manatee County Citizen's Against Pollution (MCAP)
Past President - Federation of Manatee County Associations



AOR Data (ARMS Ad Hoc Report)

SITE NAME **MANATEE POWER PLANT**

Sum of ACT EMIS SUM		YEAR						
EU	POLLUTANT (TPY)	1995	1996	1997	1998	1999	2000	2001
Unit 1	NOX	2,448	2,550	2,977	3,957	3,368	3,845	5,459
Unit 2	NOX	3,152	2,364	2,930	4,589	4,455	4,289	4,881
TOTAL	NOX	5,600	4,914	5,907	8,547	7,823	8,134	10,340
Unit 1	SO2	8,191	8,646	9,999	12,095	10,910	12,455	17,685
Unit 2	SO2	10,533	8,005	9,858	14,027	14,430	13,896	15,812
TOTAL	SO2	18,724	16,651	19,857	26,121	25,340	26,351	33,497

Acid Rain Program Data

Unit 1	HEAT INPUT (MMBTU)	20,537,433	19,115,489	21,733,888	32,077,990	27,853,349	26,557,013	34,369,487
Unit 2	HEAT INPUT (MMBTU)	27,442,247	18,657,711	21,570,307	32,224,654	30,768,019	27,890,397	30,823,660

Chart 1. FPL Manatee Heat Input (mmBtu/yr)
EPA Acid Rain Program Data

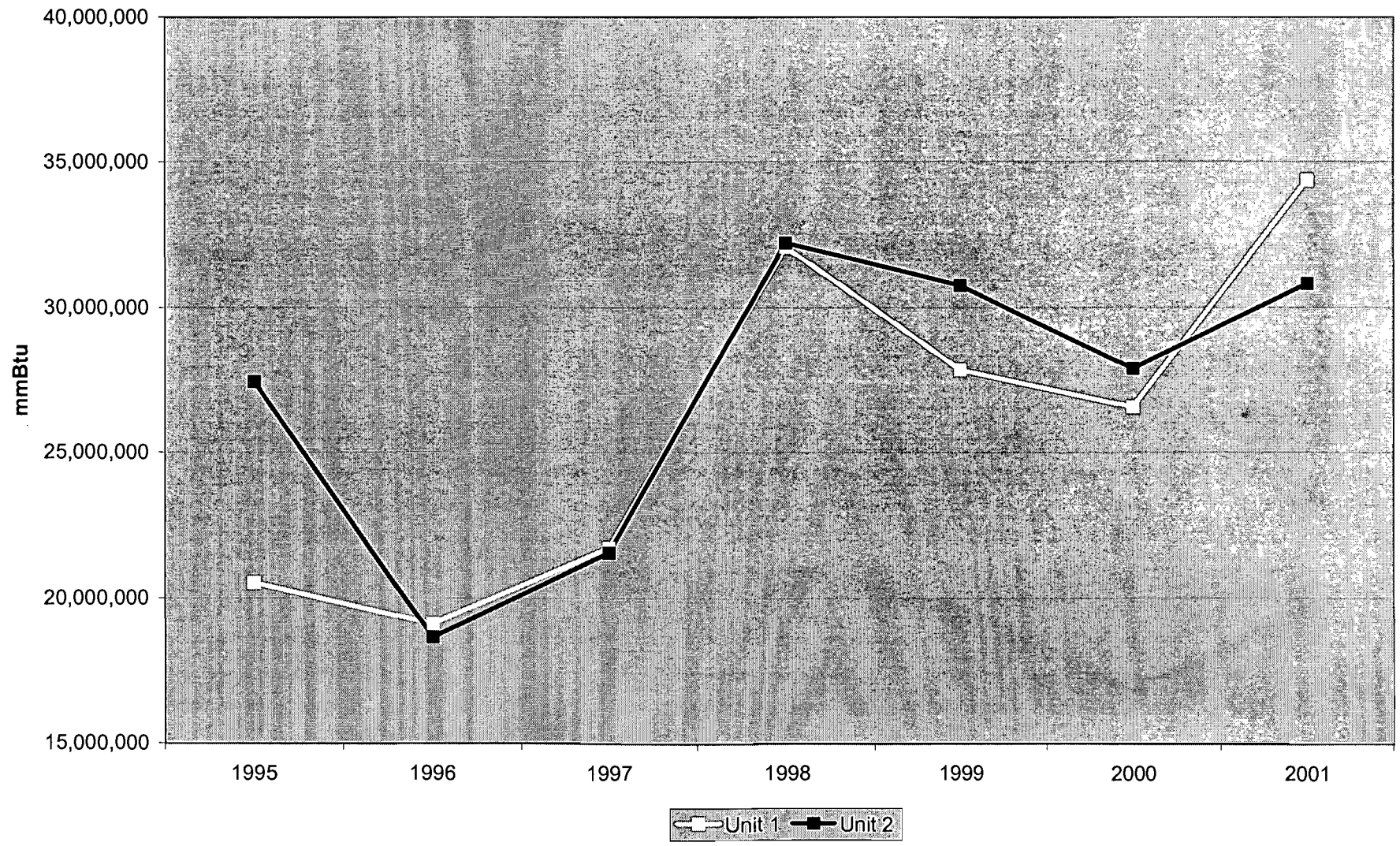


Chart 2. FPL Manatee Normalized Emissions (lb/mmBtu by Unit)

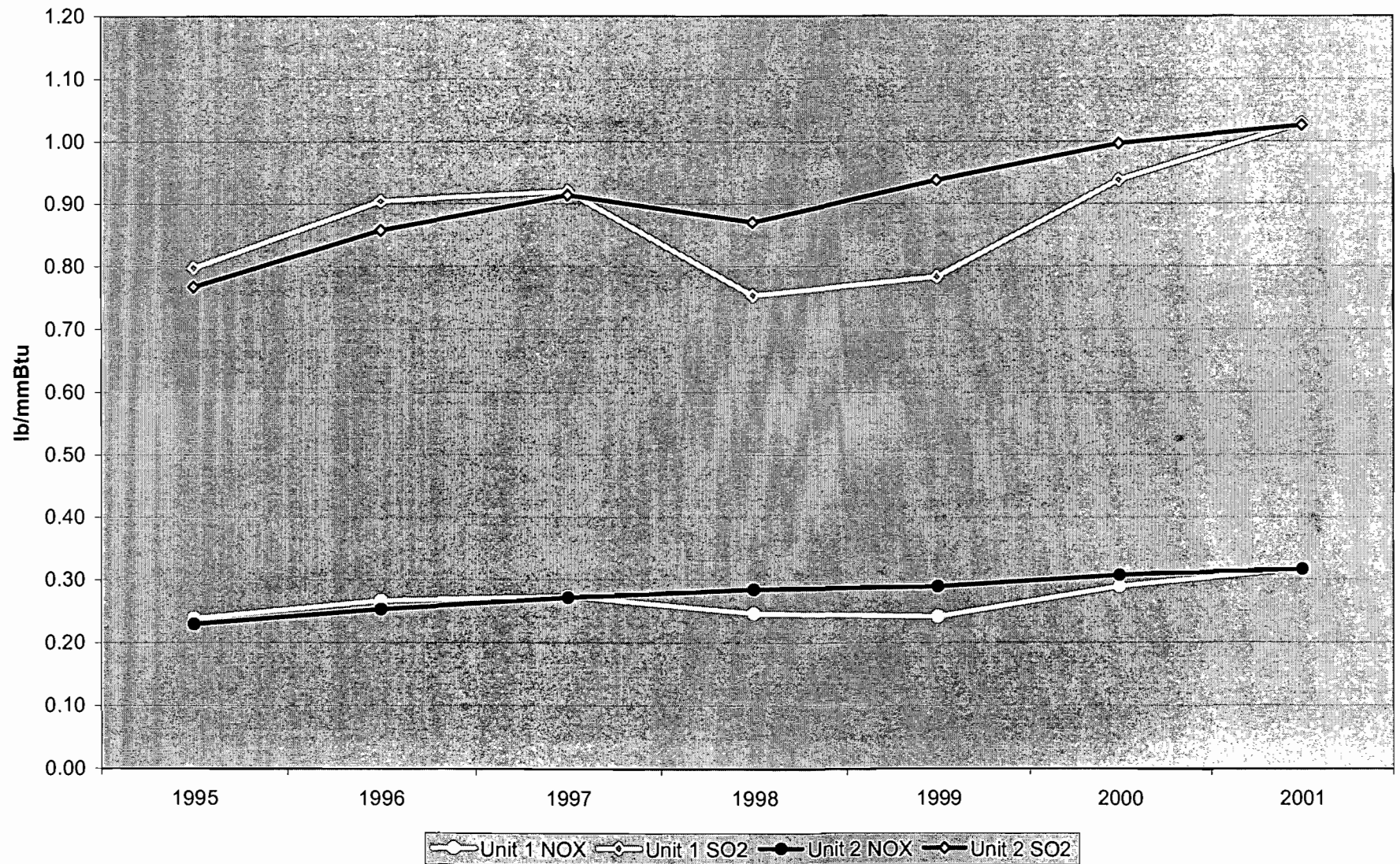


Chart 3. FPL Manatee Emissions (TPY by Unit)

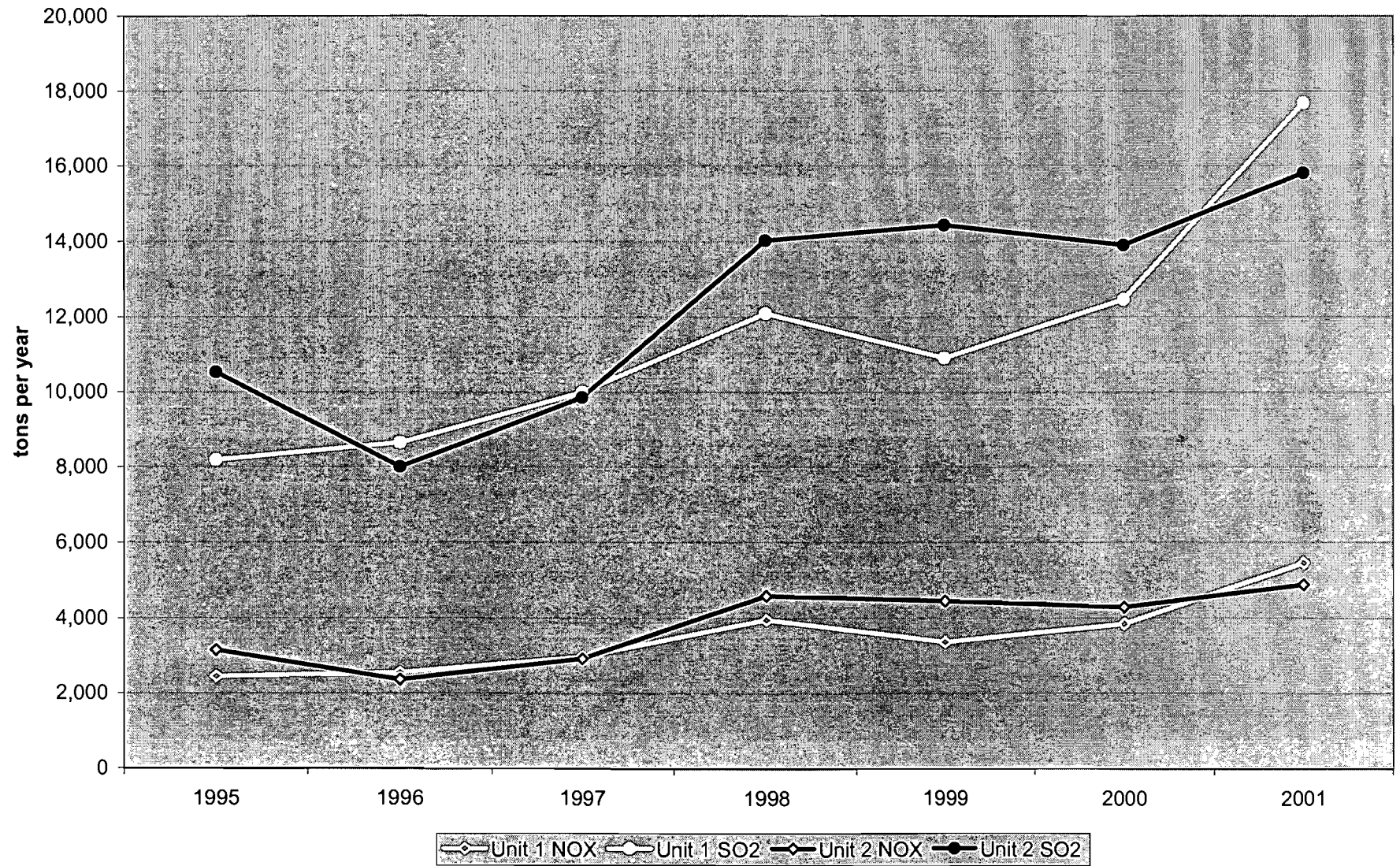
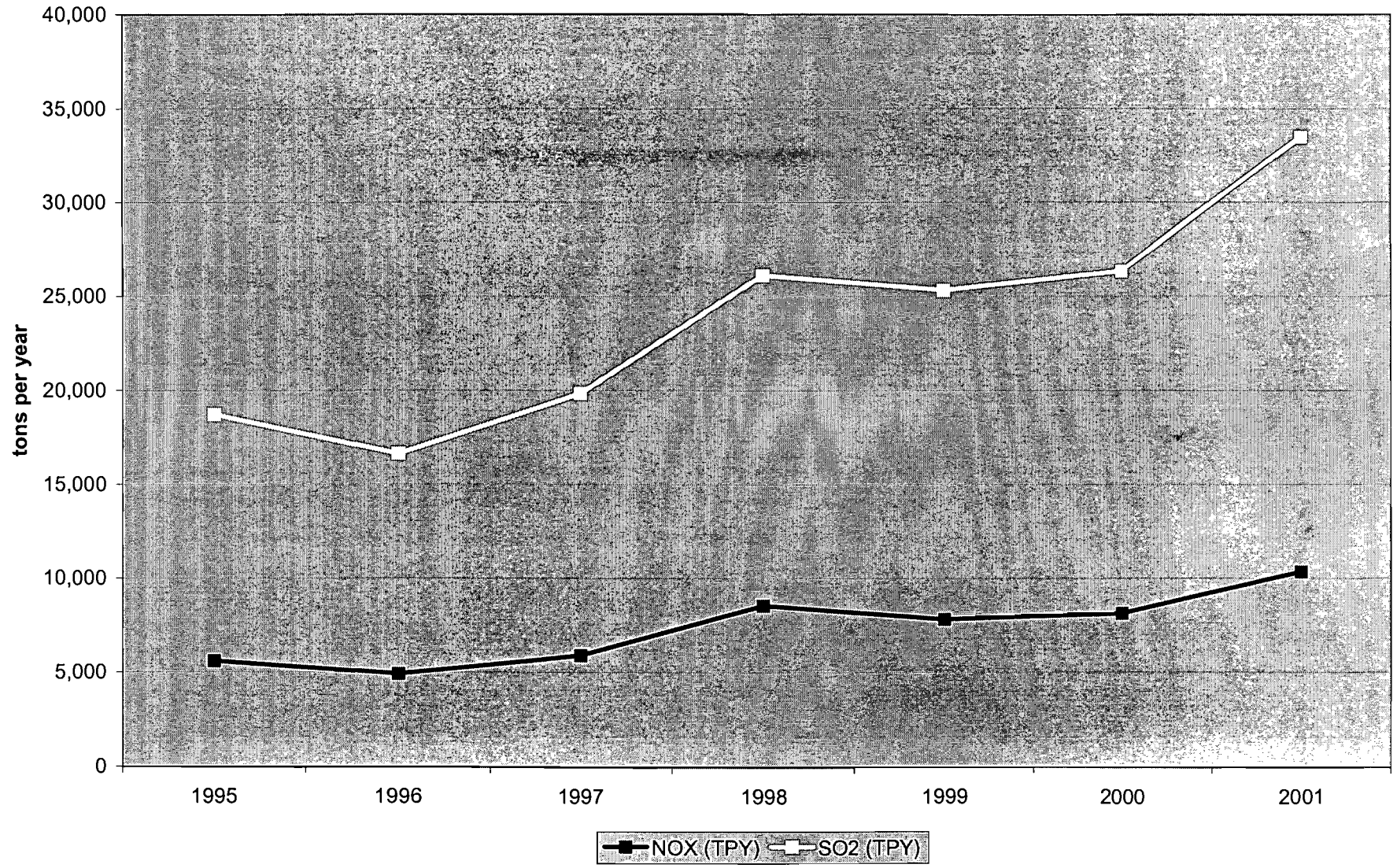
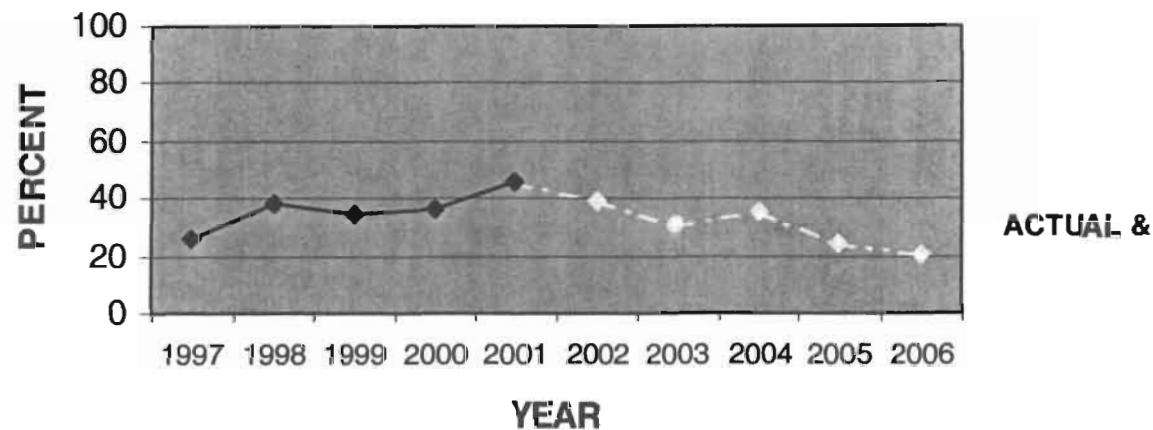


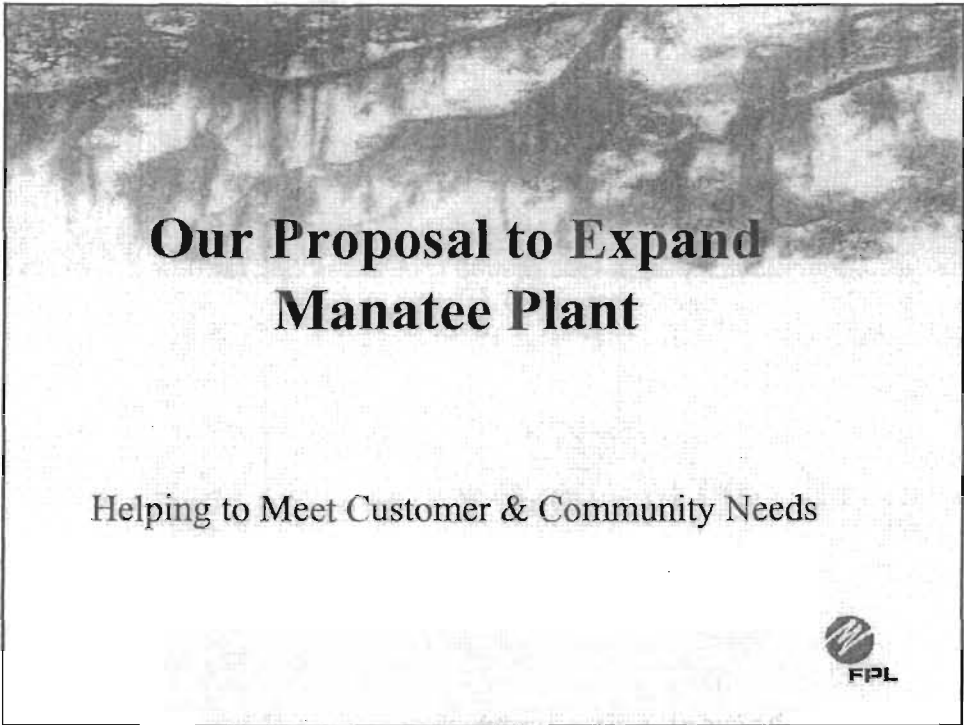
Chart 4. FPL Manatee Emissions (TPY)



System Planning Projected Load Forecast

**MANATEE PLANT UNITS 1&2 ANNUAL
CAPACITY FACTOR**





Our Proposal to Expand Manatee Plant

Helping to Meet Customer & Community Needs



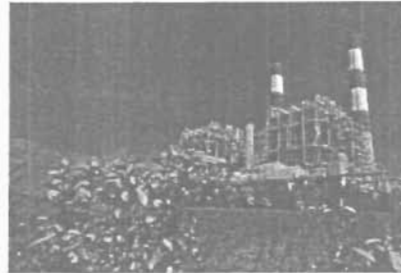
Sharing and Learning

- Provide description of the current site
- Share information on the proposal
- Explain community research
- Share our plans for outreach and dialogue.
- Seek your comments and suggestions.



Safe, Reliable Operation

- Providing service for more than 25 years
- 9,500-acre site with 2 oil-fired units, providing 1,600 megawatts
- Site designed for more generation
- Area's growth -- faster than the rest of Florida



Adding New Technology

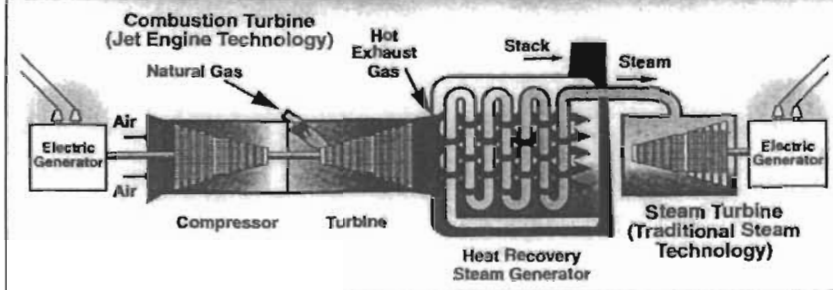


- Build Manatee Unit 3
- Use natural gas in very efficient combined cycle technology
- Gas supply now available
- Serve 235,000 more customers systemwide with 1,100 megawatts



Adding New Technology

How does a combined-cycle power plant work?



Benefits of Proposed Expansion

- Increased efficiency
- Use of an existing site
- Improved system back-up, self-sufficiency
- Additional tax revenues



Environmental Interests

Air Quality

Clean-burning natural gas

- Design, controls to minimize emissions
- Clean Air Act standards to be met



Environmental Interests

Water Use

- Continued commitment to protect water resources
- Current water use permit can meet needs of Unit 3
- Proposal to reduce rate of water withdrawals



Another Plant Opportunity – Natural Gas Option for Existing Units

- Proposing to use both natural gas and oil at Manatee Units 1 & 2
- A separate plant initiative
- Benefits
 - Strengthens our fuel diversity position
 - Can improve environmental performance to the extent that gas is used



Existing Units' Operation

- Use of gas will depend on energy demands, costs & fuel availability
- Expect to operate somewhat less than in the past
- Continued operation remains important



What's Involved?



- Must prove need
- Must earn construction, operating permits
- Will continue community dialogue
- Expect construction in 2003; startup in 2005



What We're Hearing

- Improve our communication
- Listen, be open to comments and suggestions
- Address people's interests, such as protecting air quality
- Share information on community benefits of the expansion



How We're Responding



- Asking for your views, advice
- Preparing comprehensive information
- Evaluating ways to contribute
- Inviting people to see our facilities
- Open House May 18



What Is Important to Know?

- As we go forward:
 - What are your interests and priorities for this proposal?
 - What do we need to make sure we do or don't do?
 - What's important when it comes to communicating well?
 - What else?



Appendix



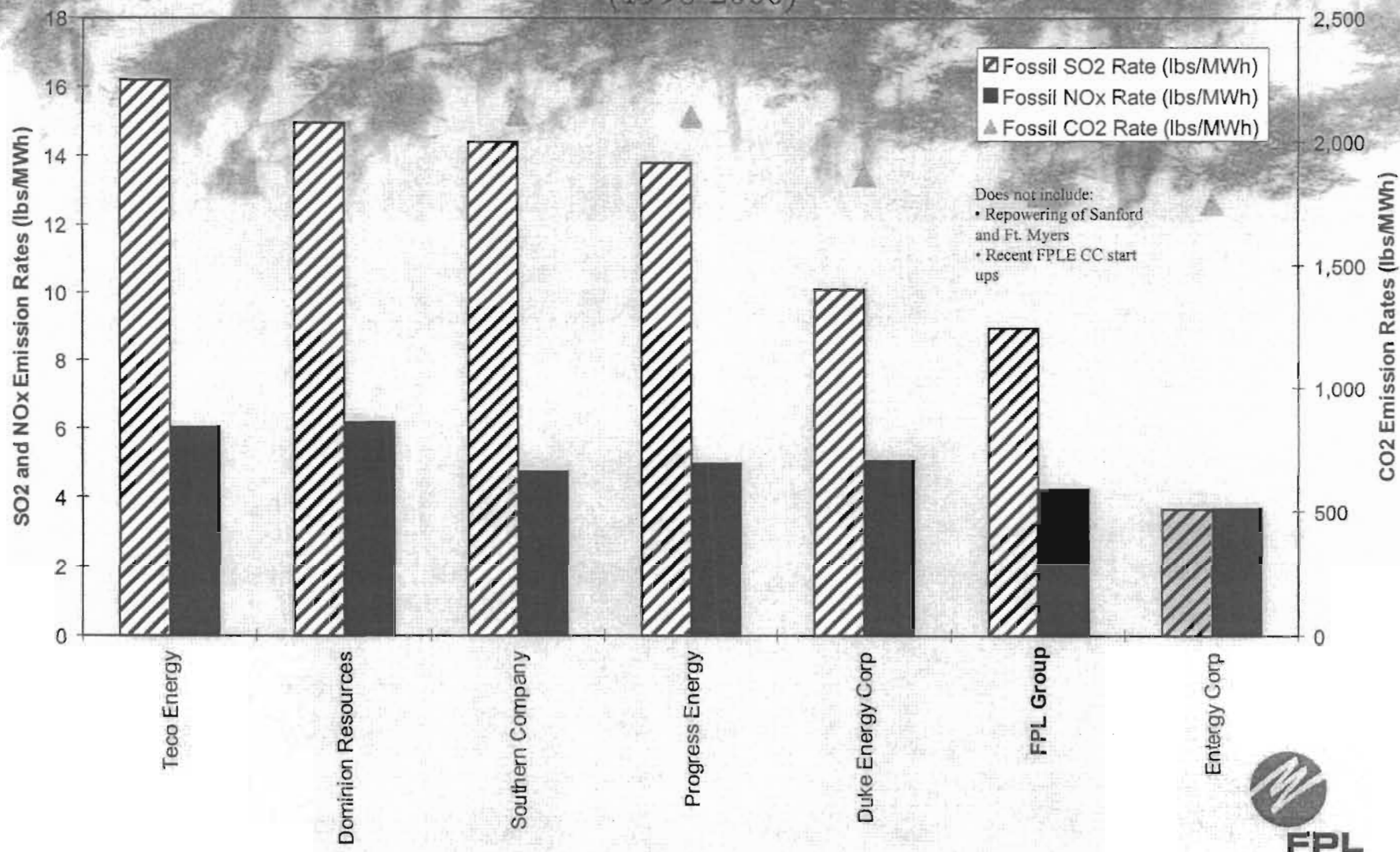
Environmental Record

- FPL's rate of emissions of sulfur dioxide, nitrogen oxide and carbon dioxide are significantly below the national and state averages and put FPL among the lowest emitters in the industry.
- Within the past 10 years, FPL-operated power plants have reduced the emission rate of sulfur dioxide by 28% and nitrogen oxide by 41%.
- Since installing new Low NOx burners at Manatee, we have reduced opacity, nitrogen oxide and carbon monoxide emissions, as well as water use.
- The installation of the site's cooling pond seepage recovery system has eliminated 6 tons of nitrogen from discharging into Tampa Bay annually.



Regional Competitors Fossil Emission Rates

(1998-2000)



Manatee Plant



Unit 3 Rendering





Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

November 15, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mary J. Archer, QEP
Environmental Services Department
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Re: FPL – Manatee Plant
Project: Burner Replacement for Units 1 and 2
DEP File No. 0810010-005-AC
ARMS ID No. 0810010, Emissions Units 001 and 002

Dear Ms. Archer:

This letter responds to the emissions summary report (dated September 10, 2001) provided by William Yeager, the Manatee Plant General Manager.

Background

In a letter date December 21, 1999, the Department authorized the replacement of the existing steam-atomizing burners for Units 1 and 2 with mechanical-atomizing burners (Model CSL Twin Register Low NOx Burner manufactured by ABB Combustion Services Ltd). The authorization was based on the specific information provided by FPL and did not recognize any change to accommodate fuels not currently authorized by permit. At that time, FPL indicated that the project would not result in increased emissions and FPL expected the following:

- A decrease in NOx emissions due to the air and fuel staging design of the low NOx burners;
- A decrease in CO emissions due to more complete combustion resulting from better fuel atomization;
- Perhaps a slight decrease in particulate matter emissions due to more efficient combustion; and
- A reduction of 30 to 37 million gallons of water per year (currently needed for steam atomization).

To provide reasonable assurance that no emissions increases occurred as a result of this project, the Department required emissions reporting based on stack testing (carbon monoxide emissions and particulate matter), CEMS data (nitrogen oxides), and COMS data (opacity). FPL submitted the report dated September 10, 2001 to satisfy this reporting requirement.

Comments and Questions

I have reviewed the report and offer the following summary table for discussion:

"More Protection, Less Process"

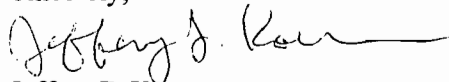
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Table A. Summary of Emissions Data for Unit 1

Pollutants	FPL Test Report	Permit Limit	2000 AOR Report	2001 Acid Rain Data
Carbon Monoxide	0.567 (549 ppm)	NA	0.64 lb/MMBtu	ND
Nitrogen Oxides	0.30 lb/MMBtu	0.30 lb/MMBtu	0.30	0.25 lb/MMBtu
Opacity	17%	40%	ND	ND
Particulate Matter	0.06 lb/MMBtu	0.1 lb/MMBtu	0.08	ND
Sulfur Dioxide	ND	1.08 lb/MMBtu ($\leq 1.0\%$ S by wt.)	1.00 lb/MMBtu (0.97% S by wt.)	1.06 lb/MMBtu
Volatile Organic Compounds	ND	ND	0.005 lb/MMBtu (≈ 62 tons per year)	ND

The FPL stack test report indicated that the average heat input for the three test runs was 7582 MMBtu per hour. This is below the requirement to perform testing at 90% of the permitted maximum heat input of 8650 MMBtu per hour, which would be at least 7785 MMBtu per hour. Also, the NOx emissions rate appears higher than that expected with the low-NOx burner. Please comment and provide NOx CEMS data for a 1-month period indicating each 30-day rolling average. If you have any questions, please contact me at 850/921-9536.

Sincerely,



Jeffery F. Koerner

New Source Review Section

AAL/jfk

cc: Ms. Mary Archer, FPL
Mr. William Yeager, FPL Manatee Plant
Mr. Joe Cox, Southwest District Office DEP
Manatee County, Air Quality Management Division

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mary J. Archer, QEP
Environmental Services Department
Florida Power & Light Company
PO Box 14000
Juno Beach, FL 33408

2. Article Number (Copy from service label)

7000 2870 0000 7028 2805

PS Form 3811, July 1999

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes
☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

U.S. Postal Service

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Mary J. Archer

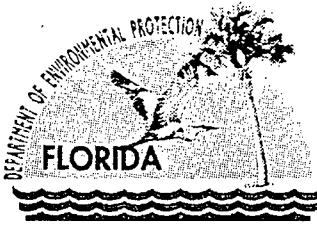
Street, Apt. No., or P.O. Box No.
PO Box 14000

City, State, ZIP+4

Juno Beach, FL 33408

PS Form 3800, May 2000

See Reverse for Instructions



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

May 17, 2000

CERTIFIED LETTER – RETURN RECEIPT REQUESTED

Mr. William L. Yeager, Plant General Manager
Florida Power & Light Company – Manatee Power Plant
19050 Highway 62
Parrish, FL 34219-9220

Re: FPL Manatee Plant
Burner Change-out Project: Burner Replacement for Units 1 & 2
DEP File No. 0810010-005-AC
ARMS ID No. 0810010, Emissions Unit 002
Clarification of Replacement Date

Dear Mr. Yeager:

I received a copy of your letter to the Southwest District office regarding clarification of the "replacement date" for the burners. The letter accurately reflects my discussion of this matter with Joe Cox and Mary Archer. However, the letter refers to the burner replacements as a "pollution control project". Please be aware that this term has the following specific meaning in accordance with Rule 62-212.400(2)(a)2., F.A.C.

"Pollution Control Project Exemption. A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.21(b)(2)(iii)(h) shall not be subject to the preconstruction review requirements of this rule."

Federal regulation 40 CFR 52.21(b)(2)(iii) states,

"A physical change or change in the method of operation shall not include:

(a) through (g) omitted.

(h) The addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the Administrator determines that such addition, replacement, or use renders the unit less environmentally beneficial, or except: (1) When the Administrator has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I, if any, and (2) The Administrator determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation."

"More Protection, Less Process"

Printed on recycled paper.

In the original request for approval of this project, FPL proposed to replace the existing "Forney" steam-atomizing burners with new mechanically atomized, low NOx burners (LNB) manufactured by ABB Combustion Services, Ltd. FPL stated that replacement parts for the current burners were difficult to acquire and that the primary purpose of the replacement was to increase the reliability of the burners. Incidental benefits of the project included decreased water consumption and possible reductions in plume opacity and nitrogen oxide emissions. The Department did not make and has not made a determination that the burner replacements constitute a "pollution control project" as defined by the regulations.

If you have any questions, please contact Jeff Koerner at 850/414-7268.

Sincerely,

 5/17

A.A. Linero, P.E. Administrator
New Source Review Section

cc: Mary Archer, FPL
Bill Thomas, SWD
Joe Cox, SWD
Manatee County -- Air Quality Management Division

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. William Geaser
 FP & L - Manatee Plant
 19050 Hwy 62
 Parrish, FL

34219-9220

2. Article Number (Copy from service label)

Z 341 355 291

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

GALE KINNE 5-17-00

C. Signature

X Gale Kinne

☐ Agent
☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below: ☐ Yes ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

Z 341 355 291

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	William Geaser
Street & Number	FP & L - Manatee P.
Post Office, State, & ZIP Code	Parrish FL
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	5-17-00
0810010-005-AC	
Burner Replacement 142	

PS Form 3800, April 1995



RECEIVED

MAY 10 2000

BUREAU OF AIR REGULATION

May 8, 2000

Mr. William C. Thomas
Florida Department of Environmental Protection
S.W. Florida District
3804 Coconut Palm Drive
Tampa, Florida 33619-8318

Re: **FPL -Manatee Plant**
Burner Change-out Project: Burner Replacement for Units 1 & 2
DEP File NO. 0810010-005-AC
ARMS ID No. 0810010, Emissions Unit 002
Clarification of "Replacement Date"

Dear Mr. Thomas:

Manatee Plant is currently balancing low NOx burners in the number 2 unit as part of a pollution control project approved for both Manatee units. In past low NOx burner replacements at other FPL facilities [specifically the Tri-county area] the Department addressed the replacement date as FPL's acceptance date from the manufacturer. The new burners still require balancing at high loads to maximize the NOx reduction and minimize the opacity impact before FPL will accept them as replaced from the manufacturer.

Al Linero and Joe Cox of FDEP recently had conversations with Mary Archer of FPL indicating that they concur with the following interpretation. The low NOx burners will be considered "replaced" upon the acceptance by FPL from the manufacturer. The 60-day compliance test date window will commence upon FPL's acceptance from the manufacturer or the "replaced" date.

If you require any additional information, please do not hesitate to call me at 813-776-5211.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Yeager", with a stylized flourish below it.

William L. Yeager
Plant General Manager
Florida Power & Light Company

cc: Florida Southwest District DEP - Joe Cox
cc: FDEP Tallahassee - Al Linero ✓
cc: Manatee County - Air Quality Management Division



FPL

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

1/11 *AC*
pls handle *cm*

January 10, 2000

RECEIVED

JAN 11 2000

Mr. Clair Fancy, Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd. Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

Re: FPL –Manatee Plant
Project: Burner Replacement for Units 1 & 2
DEP File NO. 0810010-005-AC
ARMS ID No. 0810010, Emissions Units 001 & 002
Particulate Test Method Change Request

Dear Mr.Fancy:

In response to the December 21, 1999, letter authorizing the above addressed project, we request a change in the particulate test method.

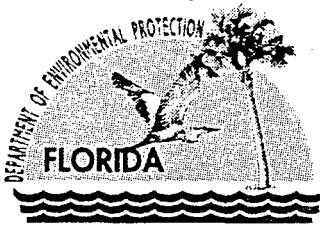
The letter of December 21, 1999, addressed Method 5 as the method for use in particulate testing after the new burner installation. Method 17 has been determined as appropriate for the stack temperatures at the Manatee Power Plant units and has been used for Particulate Matter determination in the past. We Request the method be changed from Method 5 to Method 17 or other approved methods.

This issue was discussed with Jeff Koerner of your Department on January 10, 2000. Thank you for the Department support in our pursuance of this project, if I can be of assistance, please do not hesitate to call me at 561-691-7057.

Sincerely,

Mary J. Archer, QEP
Principal Environmental Specialist
Florida Power & Light Company

Cc: Jeff Koerner - FDEP
cc: Florida Southwest District DEP – Jerry Kissel
cc: Manatee County – Air Quality Management Division



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

December 21, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mary J. Archer, QEP
Environmental Services Department
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Re: FPL – Manatee Plant
Project: Burner Replacement for Units 1 and 2
DEP File No. 0810010-005-AC
ARMS ID No. 0810010, Emissions Units 001 and 002

Dear Ms. Archer:

This letter responds to your original request received October 25, 1999 to replace burners at the Manatee Plant on Unit 2 in the spring of 2000 and on Unit 1 in the fall of 2000. The Department received additional information from FPL on December 13, 1999 regarding this request.

Background

Florida Power & Light Company (FPL) operates a steam electric plant in Manatee County located at 19050 State Road 62 in Parrish, Florida. Units 1 and 2 at this plant are fossil fuel (oil) fired steam generators, which were originally equipped with mechanical-atomizing burners. In 1994/1995, FPL replaced the mechanical atomization with steam atomization in these units without obtaining any air permits or prior Department approval. FPL states that the purpose of the 1994/1995 change was to increase the combustion efficiency of the burners.

Current Request

FPL proposes to replace the existing "Forney" steam-atomizing burners with new mechanically atomized, low NOx burners (LNB) manufactured by ABB Combustion Services, Ltd. Apparently, replacement parts for the current burners are difficult to acquire. FPL identifies the primary purpose of the burner replacement project as increasing the reliability of the burners and reducing plume opacity. FPL's Martin Plant in Indiantown has operated similar steam generators with the new burners since 1985. Based on this experience, FPL also anticipates that this project will result in the following:

- A decrease in NOx emissions due to the air and fuel staging design of the low NOx burners;
- A decrease in CO emissions due to more complete combustion resulting from better fuel atomization;
- Perhaps a slight decrease in particulate matter emissions due to more efficient combustion; and
- A reduction of 30 to 37 million gallons of water per year, currently needed for steam atomization.

"More Protection, Less Process"

Printed on recycled paper.

Comments

The Department received comments from DEP's Southwest District Office. The district expressed concerns about the possibility of increased particulate matter or acid smut emissions. Apparently, the district office received several complaints regarding soot fallout in 1994/1995. The number of complaints appeared to decrease with the addition of steam atomization.

Conclusion

The Department has reviewed the available information regarding FPL's request and authorizes the replacement of the existing burners with Model CSL Twin Register Low NOx Burner manufactured by ABB Combustion Services Ltd. This authorization does not recognize any changes to accommodate any fuels not currently authorized by permit. The authorization is granted solely for the proposed burner replacements on Units 1 and 2 at the Manatee Plant and is based on the specific information provided by FPL (attached) and the items presented below:

- The primary purpose of the project is to increase reliability of the burners and decrease the plume opacity. FPL identifies this project as routine maintenance/replacement for the existing units. The burner replacements are not part of a larger project that could be construed as a life extension project.
- The dispatch order and relative use of Units 1 and 2 will not change as a result of this project.
- The inherent design of the proposed burners incorporates compatibility with natural gas. FPL acknowledges that Manatee Plant Units 1 and 2 are single-fuel units and that *any* fuel change would require appropriate construction permit modifications.
- FPL certifies that this project will not result in an increase in emissions. Any emissions decreases resulting from this project are coincidental and not subject for use as a future net emissions decrease.

To provide reasonable assurance that no emissions increases occurred as a result of this project, FPL shall provide the following additional information.

1. In accordance with the procedures described in Appendix C of 40 CFR 60, FPL shall conduct emissions performance tests for carbon monoxide (EPA Method 10) and particulate matter (EPA Method 5) within 60 days of completing the burner replacements for each unit. A report indicating the results of the emissions performance tests shall be submitted to the Department no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. In addition, NOx and opacity data from the continuous monitors collected during each CO and PM test runs shall be summarized and included in the report to the Department for review.
2. FPL shall submit information regarding the replacement equipment to the Title V Section of the Bureau of Air Regulation and obtain the appropriate Title V revision, as necessary.

A copy of this letter shall be filed with all current air permits and shall become parts of those permits. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a

petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

Mediation is not available in this proceeding.

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

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is

defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

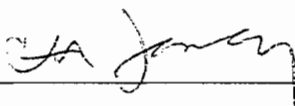
Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this order will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

If you have any questions regarding this letter, please contact Al Linero or Jeff Koerner at 850/488-0114.

Executed in Tallahassee, Florida.


C.H. Fancy, Chief
Bureau of Air Regulation

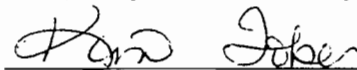
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12-22-99 to the person(s) listed:

Ms. Mary Archer, FPL*
Mr. Jerry Kissel, Southwest District Office DEP
Chair, Manatee County B.C.C.
Clarence Troxell*
Gregg Worley, EPA

Clerk Stamp

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


(Clerk)

12-22-99
(Date)

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy, Chief, BAR
THROUGH Al Linero, BAR - New Source Review Section
FROM: Jeff Koerner, BAR - New Source Review Section JK
DATE: December 21, 1999
SUBJECT: FPL Manatee Plant
Burner Replacements for Units 1 and 2

FPL has requested approval to replace the existing steam-atomized Forney-type burners with mechanically atomized low-NOx burners. Apparently, replacement parts are difficult to obtain for the older burners and the change to newer burners would provide greater reliability. FPL also claims the newer burners would reduce opacity, NOx, CO, and water consumption (used for current steam atomization). FPL states that this project is considered routine maintenance/replacement and will not increase emissions, change the dispatch order of the Manatee Plant or increase the relative use of these units. Although the proposed burners incorporate compatibility with natural gas, FPL acknowledges that appropriate air construction permit modifications are necessary to incorporate any fuel change. The switch back to mechanical atomization may prevent these units from firing orimulsion. We believe this request is best handled with a letter of authorization instead of a permit modification.

AL/jfk

Attachments

Fold at line over top of envelope to

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Clarence Troxell
3321 Lakeside Circle
Parrish, FL 34219

4a. Article Number

2 031 391 910

4b. Service Type

- | | |
|---|---|
| <input type="checkbox"/> Registered | <input checked="" type="checkbox"/> Certified |
| <input type="checkbox"/> Express Mail | <input type="checkbox"/> Insured |
| <input type="checkbox"/> Return Receipt for Merchandise | <input type="checkbox"/> COD |

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X *Clarence Troxell*

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

2 031 391 910

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to <i>Clarence Troxell</i>	
Street & Number <i>3321 Lakeside Circle</i>	
Post Office, State, & ZIP Code <i>Parrish FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date <i>12-22-99</i>	
<i>081000-005-AC</i>	

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse?

- Attach ... permit.
- Write "Return Receipt Requested" on the ...
- The Return Receipt will show to whom the article was delivered and the date delivered.

- ☐ Addressee's Address
 - 2. ☐ Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
Mary Archer, QEP
Environmental Services Dept
FP & L
PO Box 14000
Juno Beach, FL
33408

4a. Article Number
Z 031 391 909

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

Z 031 391 909

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to		Mary Archer
Street & Number		FP & L
Post Office, State, & ZIP Code		Juno Beach FL
Postage	\$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	
Postmark or Date	12-22-99	
0010010-005-AC		

PS Form 3800, April 1995

November 22, 1999

To: Al Linero

From: Jerry Kissel 

RECEIVED

DEC 01 1999

BUREAU OF AIR REGULATION

Re: FPL Manatee Plant Proposed Burner Change,
FPL letter 10/22/99 and DEP letter in response 11/1/99

In 1994-1995 and occasionally since then, we have had various contacts with Mr. Clarence Troxell and his neighbors regarding a black gritty substance being deposited on their white tile roofs, which they believed to come from the Manatee plant. They have stated that the problem seemed to get significantly better around the time that the mechanical atomization burners were replaced with steam-atomized burners.

I received a call on the subject of the proposed conversion back to mechanically atomized burners from Mr. Troxell on 10/29/99, in which he expressed his concern that the proposed mechanically-atomized burners could worsen the deposition situation described above.

Please consider the above comments in your evaluation of this application. In terms of questions:

- 1) What are the effects of a change in burners in all operating modes, e.g., during soot blowing, during load changes, etc? Is there any mode in which fallout would increase? (note that FPL's letter discussed opacity, which does not necessarily always correlate with PM and fallout at a particular receptor, and also was oriented to "high loads at steady state conditions")
- 2) If this change is a "physical and operational change" as in your letter of 11/1/99, then should the change to steam atomization in 1994-1995 be reevaluated at this point, since it may have been done at the time without DEP's knowledge?

Thanks for the opportunity to comment.

c: Mr. Troxell
3321 Lakeside Circle
Parrish, FL 34219
941-776-3047

Manatee County EMD

fpl1199.doc

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 23-Nov-1999 07:12am
From: Alvaro Linero TAL 850/921-9523
LINERO_A@a1.epic1.dep.state.fl.us
Dept:
Tel No:

Subject: Re: FPL Manatee Burner Change

Gerry. Thanks for your comments.

The present project is a complete changeout of burners including atomizers. The new burners are like the ones at FPL Martin where there are apparently less problems. The new "Martin Type" burners with mechanical atomization are bound to be better than the existing burners with ~~mechanical~~ ^{steam} atomization.

The 1994-95 project was apparently implementation of steam atomization with the old burners.

My guess is they will have situation that is better than the pre-1995 case. A change may be a physical or operational change, but that does not necessarily make it a modification with respect to NSPS or PSD. There needs to be an emissions increase. Even Clarence seems to say things got better.

Even if the new project increases one pollutant a little bit (which I don't necessarily believe it does), the decreases in NOX would probably qualify it as a pollution control project.

Your comments are appreciated. Just send them when you consider them final.

Thanks. Al.

Thanks, Al
(I assume this is a typo)
(I didn't change the)
memo
JR
no not an error!
al



Jeb Bush
Governor

Department of INTEROFFICE MEMORANDUM Environmental Protection

Date: 09-Dec-1999 04:41pm
From: Mary Archer
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
Mary.Archer@fpl.com
Dept.
Tel No:

David B. Struhs
Secretary

To: Alvaro.Linero (Alvaro.Linero@dep.state.fl.us)

Subject: Manatee Burner Change out response

Al

Attached is the response to your November 1, 1999 letter. A hard copy will be following in the mail shortly that includes drawings. Please do not hesitate to contact me with any questions at (561)691-7057. Thank you, Mary

(See attached file: PMT Brn Proj-FINAL 12-9-99.doc)

Mr. Al Linero
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd. Tallahassee, Florida 32399-2400

**Re: FPL –Manatee Plant
Proposed Burner Change-out
Response to Manatee Burner Replacement**

Dear Mr. Linero:

I am writing in response to your letter of November 1, 1999 on the referenced subject. FPL continues to believe that replacement of the burners at Manatee Units No. 1 and 2 is not a physical or operational change under the definition of "modification" found at Rule 62-210.200(188), F.A.C. Rather, it should be viewed as routine replacement of component parts under subparagraph 1.a. of that definition, and thus specifically not considered a "modification". Agreement on this point is not critical to the Department's handling of this matter, however, as the burner replacement will not in any event result in an increase in the actual emissions of any air pollutant from the Manatee Plant (see information provided below). Moreover, the new source review requirements are also inapplicable because the burner replacement constitutes a "pollution control project" under Rule 62-212.400(2)(a)2., F.A.C.

For these reasons, no application for a construction permit is required for the proposed burner replacement. To the extent revision of the Manatee Plant's air operation permit is considered appropriate, we suggest any change would be descriptive only, and implemented as an administrative amendment.

In your email of 11/28/99 two issues were raised that I will attempt to address here. The primary purpose of the project is to improve our visible emission performance and increase the overall reliability of these burners. These two items would constitute the primary goal of the project to be pollution reduction. The change-out of the burners will reduce the emissions, however, the cost of generation will not improve in relationship to the rest of the fleet of plants, so, the unit will not change in its dispatch order. The change to mechanical atomization will effect no change in the dispatch order of these units and consequently on their relative use. The combined changes will not change the use situation of the facility.

The following explanations are to address the questions in you letter of November 1, 1999.

1. Burner Type, Model, Diagram, Characteristics

Page of 3

FPL Manatee Plant Burner Replacement

December 9, 1999

The proposed burner is **CSL Low NOx Twin Register type**. This burner will be dual register design with separate sleeve type air dampers for the inner (primary) and outer (secondary) air passages (see Figure 1)

The principal of staging air and fuel in reducing NOx levels is well documented, and the associated design features are incorporated on the air side and fuel side of the burners. The air staging is accomplished by the dual register (two-zone) design, which partitions the air into two distinct regions with different flow and swirl characteristics. The fuel staging is accomplished by the design of the fuel oil atomizer tip, which develops fuel lean and fuel rich zones of atomized fuel oil into a number of flame regions, as shown in Figure 2.

2. Atomizer Characteristics

The atomizer will be a wide range mechanical atomizer, which uses a tip shut-off, constant differential pressure (spill) principle to achieve best combustion performance throughout the entire load range. The atomizer stages the fuel into several rich and lean zones, as described above. This design will be very similar to the configuration currently in use at the FPL's Martin Units 1 & 2. The fuel pressure design **range will be 1,100 Psig supply and 700 Psig return**. The burner gun assembly will be provided with a flow-reversing valve (see Figure 3) to control the oil supply to oil return differential pressure for firing or stand-by conditions, making the use of cooling and/or purge steam unnecessary. There will be no steam atomization capability with the proposed burners.

3. Manner of Emissions Reduction

NOx emissions from fuel oil firing arise mainly from two sources: the oxidation of nitrogen in the combustion air (thermal NOx) and the oxidation of the nitrogen contained in the fuel (fuel NOx). The formation of thermal NOx is strongly dependent on temperature, whereas fuel NOx is largely controlled by the air-fuel mixing process and associated residence time.

The proposed low NOx burner design recognizes these factors by incorporating staged combustion techniques. Instead of simple injection and rapid mixing of fuel and air, as achieved with the currently installed Forney burner, the air will be split into streams by the burner register, offering independent air staging. In addition, the fuel will be split into concentrated and weak flow streams to produce fuel rich and fuel lean flame regions, as previously discussed. Although the fuel will be staged into rich and lean zones for NOx reduction, the overall atomization quality (droplet size) will be reduced to achieve better burn-out. This design approach will not only reduce NOx emission (particularly at high loads) but also improve combustion performance from current conditions, which

Page of 3

FPL Manatee Plant Burner Replacement
December 9, 1999

will result in a net reduction of opacity and CO emissions, as indicated in our Notice of Intent on 18-Oct-99. Due to the improvement in opacity and CO emissions, it is expected that particulate emissions will improve slightly. No increase is anticipated in the acid smut or any SOx related emissions since the sulfur content in the fuel and excess air levels will remain the same.

4. Low Load Emission Impacts

There will be no increased emissions at low loads.

Martin Plant and Manatee Plant Proposed Burners, Fuel Capability, NOx Emissions, Relative Use

The burners presently used at the Martin Plant units are characterized as "Low NOx Burners (LNB's)"; this is a correct designation. "LNB's" is the proper designation for the proposed burners at the Manatee Plant.

The inherent design of the proposed burners, not a request for options from FPL, allows for natural gas compatibility as stated in our notice of intent. The present single fuel capability is retained, since there is no alternative fuel supply available and any fuel change would require permit modifications for this fuel type addition.

The lower Martin Plant NOx emissions are not the result of low NOx burners alone, but in conjunction with the dual-fuel capability.

The relative differences in heat input from Martin Plant 863 MW units and Manatee Plant 863 MW units are primarily due to differences in utilization based on dispatch requirements. The Martin and Manatee Plant four 863 MW units are dispatched based on fuel economics. Fuel market fluctuations between natural gas and fuel oil will dictate which units run first and longest. The change to mechanical atomization will effect no change in the dispatch order of these units and consequently on their relative use.

Thank you for your assistance in clarification of this issue for the Department. If you require any additional information, please do not hesitate to call me at 561-691-7057.

Sincerely,

Mary J. Archer, QEP
Principal Environmental Specialist

Page of 3
FPL Manatee Plant Burner Replacement
December 9, 1999

Florida Power & Light Company

cc: Florida Southwest District DEP – Jerry Kissel
cc: Manatee County – Air Quality Management Division

Cc: B.Yeager
L.French
K.Washington
M..Klein
J.Alcantara

(1)Attachment drawings

Draft Response Manatee Burner Replacement (1-Nov-99 ltr.)

Dear Mr. Linero:

I am writing in response to your letter of November 1, 1999 on the referenced subject. FPL continues to believe that replacement of the burners at Manatee Units No. 1 and 2 is not a physical or operational change under the definition of "modification" found at Rule 62-210.200(188), F.A.C. Rather, it should be viewed as routine replacement of component parts under subparagraph 1.a. of that definition, and thus specifically not considered a "modification". Agreement on this point is not critical to the Department's handling of this matter, however, as the burner replacement will not in any event result in an increase in the actual emissions of any air pollutant from the Manatee Plant (see information provided below). Moreover, the new source review requirements are also inapplicable because the burner replacement constitutes a "pollution control project" under Rule 62-212.400(2)(a) 2., F.A.C.

For these reasons, no application for a construction permit is required for the proposed burner replacement. To the extent revision of the Manatee Plant's air operation permit is considered appropriate, we suggest any change would be descriptive only, and implemented as an administrative amendment.

1. Burner Type, Model, Diagram, Characteristics

The proposed burner is CSL Low NOx Twin Register type. This burner will be dual register design with separate sleeve type air dampers for the inner (primary) and outer (secondary) air passages (see Figure 1)

The principal of staging air and fuel in reducing NOx levels is well documented, and the associated design features are incorporated on the air side and fuel side of the burners. The air staging is accomplished by the dual register (two-zone) design, which partitions the air into two distinct regions with different flow and swirl characteristics. The fuel staging is accomplished by the design of the fuel oil atomizer tip, which develops fuel lean and fuel rich zones of atomized fuel oil into a number of flame regions, as shown in Figure 2.

2. Atomizer Characteristics

The atomizer will be a wide range mechanical atomizer, which uses a tip shut-off, constant differential pressure (spill) principle to achieve best combustion performance throughout the entire load

range. The atomizer stages the fuel into several rich and lean zones, as described above. This design will be very similar to the configuration currently in use at the FPL's Martin Units 1 & 2. The fuel pressure design range will be 1,100 Psig supply and 700 Psig return. The burner gun assembly will be provided with a flow-reversing valve (see Figure 3) to control the oil supply to oil return differential pressure for firing or stand-by conditions, making the use of cooling and/or purge steam unnecessary. There will be no steam atomization capability with the proposed burners.

3. Manner of Emissions Reduction

NOx emissions from fuel oil firing arise mainly from two sources: the oxidation of nitrogen in the combustion air (thermal NOx) and the oxidation of the nitrogen contained in the fuel (fuel NOx). The formation of thermal NOx is strongly dependent on temperature, whereas fuel NOx is largely controlled by the air-fuel mixing process and associated residence time.

The proposed low NOx burner design recognizes these factors by incorporating staged combustion techniques. Instead of simple injection and rapid mixing of fuel and air, as achieved with the currently installed Forney burner, the air will be split into streams by the burner register, offering independent air staging. In addition, the fuel will be split into concentrated and weak flow streams to produce fuel rich and fuel lean flame regions, as previously discussed. Although the fuel will be staged into rich and lean zones for NOx reduction, the overall atomization quality (droplet size) will be reduced to achieve better burn-out. This design approach will not only reduce NOx emission (particularly at high loads) but also improve combustion performance from current conditions, which will result in a net reduction of opacity and CO emissions, as indicated in our Notice of Intent on 18-Oct-99. Due to the improvement in opacity and CO emissions, it is expected that particulate emissions will improve slightly. No increase is anticipated in any SOx related emissions since the sulfur content in the fuel and excess air levels will remain the same.

4. Low Load Emission Impacts

There will be no increased emissions at low loads.

Martin Plant and Manatee Plant Proposed Burners, Fuel Capability, NOx Emissions, Relative Use

The burners presently used at the Martin Plant units are characterized as "Low NOx Burners (LNB's)"; this is a correct designation. "LNB's" is the proper designation for the proposed burners at the Manatee Plant.

The inherent design of the proposed burners, not a request for options from FPL, allows for natural gas compatibility as stated in our notice of intent. The present single fuel capability is retained, since there is no alternative fuel supply available and any fuel change would require permit revision for this fuel type addition.

The lower Martin Plant NOx emissions are not the result of low NOx burners alone, but in conjunction with the dual-fuel capability.

The relative differences in annual heat input from Martin Plant 863 MW units and Manatee Plant 863 MW units are primarily due to differences in utilization based on dispatch requirements. The Martin and Manatee Plant four 863 MW units are dispatched based on fuel economics. Fuel market fluctuations between natural gas and fuel oil will dictate which units run first and longest. The change to mechanical atomization will effect no change in the dispatch order of these units and consequently on their relative use.



FPL

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

October 22, 1999

RECEIVED

OCT 25 1999

Mr. Clair Fancy, Chief
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd. Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

**Re: FPL -Manatee Plant
Proposed Burner Change-out
Notice of Intent**

08/0010 -005-AC

Dear Mr.Fancy:

In response to the telephone conversations with Scott Sheplak on October 13, 1999 and Al Linero on October 14, 1999, this letter is provided as notice of Manatee Plant's intent to replace the existing burners. The replacement burners are planned for installation on Unit 2 in the spring of 2000 and on Unit 1 in the fall of 2000.

Background

The Manatee Plant's original burners were Forney Type "QPWRMA" with mechanical atomization and were "state of the art" in the late 1970's when they were installed. In late 1994 and early 1995 in an effort to increase the combustion efficiency of these burners, the plant changed from mechanical atomization to steam atomization. Due to the age of the burners, it has become somewhat difficult to acquire replacement parts. To improve our visible emission performance and increase the overall reliability of these burners, we would like to replace them with burners manufactured by ABB Combustion Services, Ltd (formerly International Combustion, Ltd). We have had very successful emission control and operating experience with this type of burner at our Martin Plant in Indiantown, Florida since 1985.

Benefits

The replacement burners will be better for the environment as addressed in the attached PE signed & sealed documents. We expect to achieve emission reductions in opacity, NOx, and CO. These emission reductions will be maximized during hours of high load operations typically associated with hot summer days. The replacement burners will be mechanically atomized. This will reduce the use of water by approximately 30-37 million gallons per year.

The replacement burners will be both more reliable and natural gas compatible to allow the option of fuel flexibility in the future. Proper permit modifications would be completed for any fuel type additions.

Page 2

Notice of Intent – Manatee Burner Change-out

Based upon the above facts, and as discussed in the telephone conversations of October 13 and 14, 1999, the only requirement for this matter is satisfied by this notice of intent. If you require any additional information, please do not hesitate to call me at 561-691-7057.

Sincerely,

A handwritten signature in black ink, appearing to read "Mary J. Archer", with a long horizontal flourish extending to the right.

Mary J. Archer, QEP
Principal Environmental Specialist
Florida Power & Light Company

cc: Florida Southwest District DEP – Jerry Kissel

cc: Manatee County – Air Quality Management Division



Documentation of Emissions Reductions
Notice of Intent – Manatee Burner Change-out

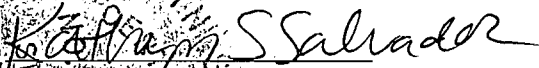
Replacement Burner Emission Impact

There will be no increases in emissions. The following emission reductions are expected:

- Opacity
A reduction of 10-15 points in opacity at high loads during steady state conditions is anticipated. The permit limit for opacity is 40% at steady state conditions.
- NOx
A reduction between 20 to 30% in the average daily NOx emission rate is anticipated. This is achieved by lowering the NOx emission levels during the hours of high load operation. For example, on a typical hot summer day the total accumulative tons of NOx per unit will be reduced from 23 to 16, indicating a 30 % reduction as the maximum anticipated reduction of NOx. The permit limit for NOx is 0.30 lb/mmbtu based on a 30-day rolling average.
- CO
A reduction between 20 to 30% in the CO emission rate during the hours of high load operation is anticipated.

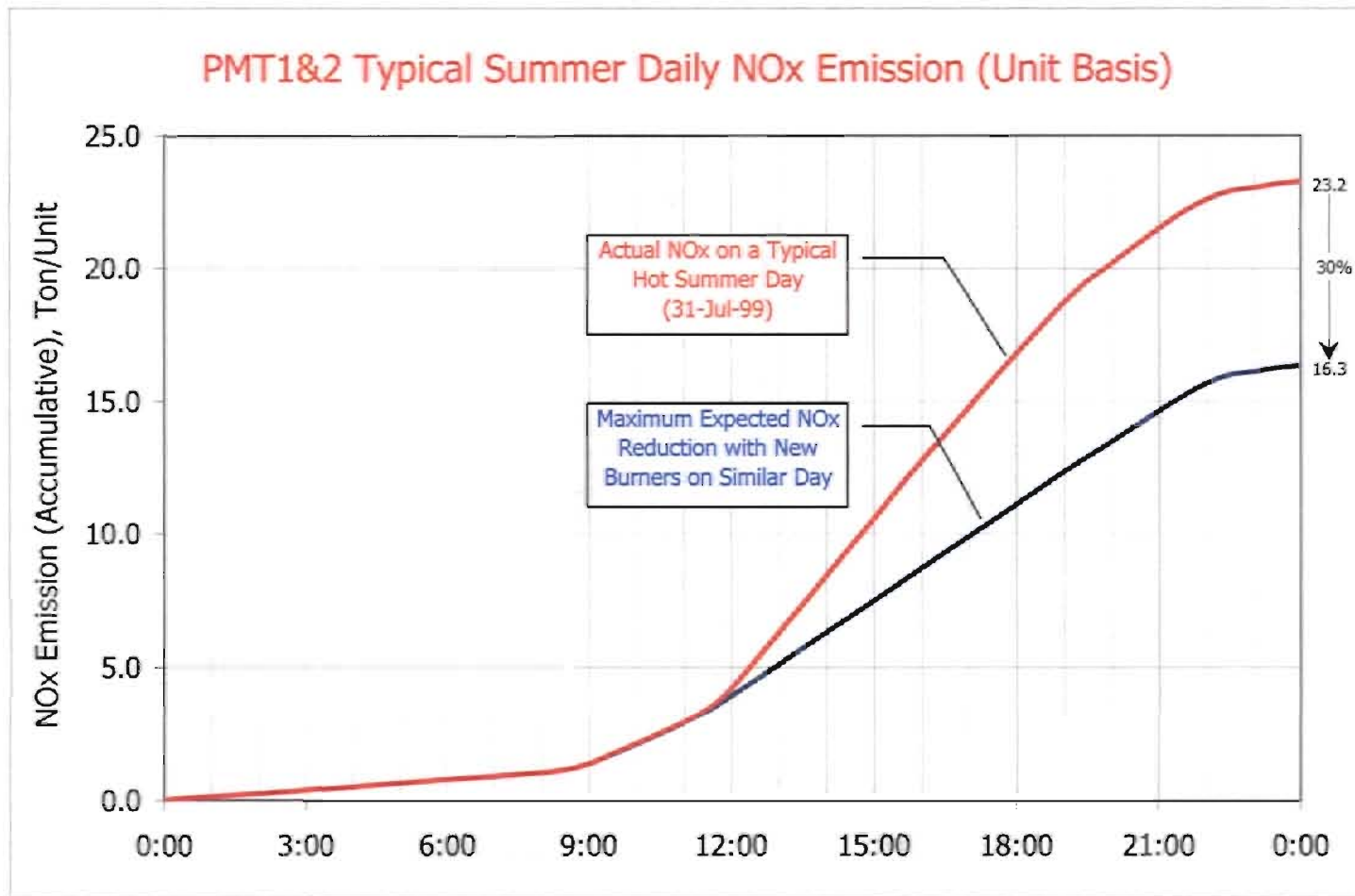
I, the undersigned, hereby certify, that: (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions described in this notice will comply with all applicable standards for control of air pollutant emissions found in the current air operating permit including the Florida Statutes and rules of the Department of Environmental Protection; (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are based upon reasonable techniques available for calculating emissions; (3) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions described in this notice will result in a reduction of emissions as identified in this notice.

PE Signed and Sealed


Kathryn S. Salvador, Florida PE No. 54726

9/22/99
Date

PMT Emission Control Summary - Summer Daily NOx Emission (990731)





Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

November 1, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Mary J. Archer, QEP
Principal Environmental Specialist
Florida Power & Light Company
Post Office Box 14000
Juno Beach, Florida 33408

Re: FPL Manatee Plant
Proposed Burner Change-out

Dear Ms. Archer:

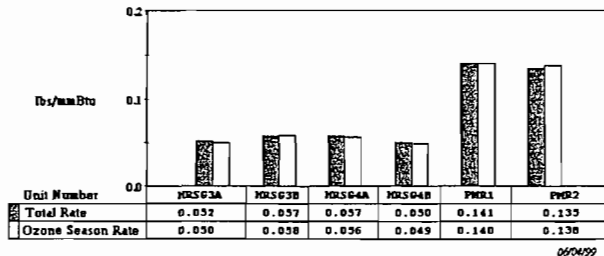
We have reviewed the Notice of Intent to replace the existing steam atomized oil burners with mechanically-atomized burners at the Manatee Power Plant. We have determined that the project is both a physical and operational change. More details regarding the project are required for reasonable assurance that emissions will not increase and that the project will not be a modification with respect to Department rules. Please provide the following information:

1. The type, model number, diagram, and characteristics of the proposed burners. This should describe how air and fuel are introduced and staged to minimize emissions.
2. Similar information regarding the actual mechanical atomizer. Include fuel pressure, operating ranges, and other typical characteristics. Advise if there will still be some steam-mechanical atomization at low load and low temperature.
3. An explanation of the manner by which emissions of carbon monoxide, particulate matter, nitrogen oxides, and visible emissions (including acid smut) are all simultaneously reduced.
4. Describe emissions impacts at low load.

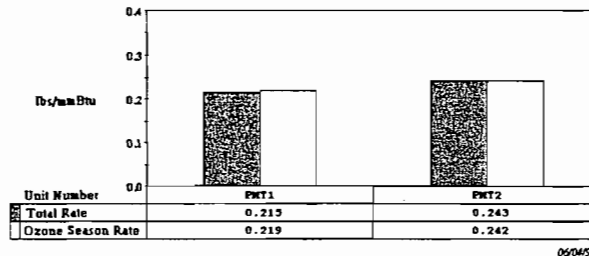
The attached figures from EPA provide some basic characteristics of the Manatee and Martin Plants. The burners presently used at the 863 MW Martin Plant units are characterized as "Low NO_x Burners (LNBs)." Please confirm this designation at Martin and advise if LNB is a proper designation for the proposed burners at the Manatee Plant. The figures also indicate dual-fuel capability at Martin and single fuel capability at Manatee. Please advise if this project will change the fuel burning capability at the Manatee Plant.

The following figures indicate that NO_x emissions are indeed substantially lower at the 863 MW Martin Plant units (PMR 1and 2) than the Manatee units. Please advise if the lower emissions are actually believed to be the result of the LNBs alone or in conjunction with the dual-fuel capability.

Martin FL Units HRSG3A, 3B, 4A, 4B, PMR1-PMR2
1997 NO_x Emission Rate

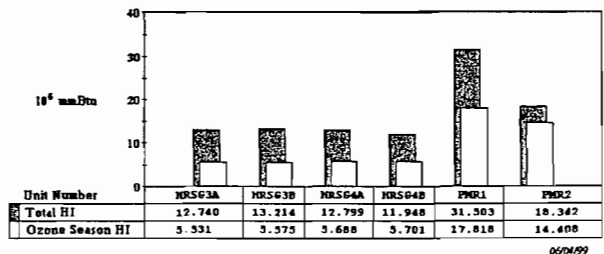


Manatee FL Units PMT1-PMT2
1997 NO_x Emission Rate

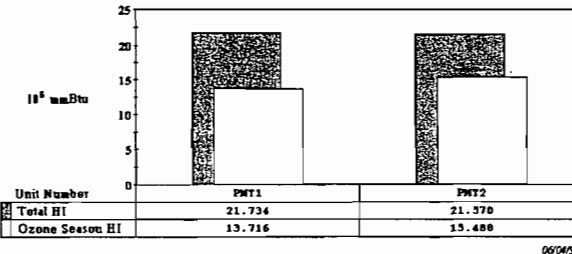


The following figures indicate that the total annual heat input is greater for the two 863 MW Martin Plant units than for the virtually-identical Manatee Plant units. Please provide a brief explanation and advise if the change to mechanical atomization will substantially affect the relative use of the Manatee units with respect to the 863 MW Martin units.

Martin FL Units HRSG3A, 3B, 4A, 4B, PMR1-PMR2
1997 Heat Input



Manatee FL Units PMT1-PMT2
1997 Heat Input



We are treating your Notice as an application. With the additional information, we will be able to issue or modify the appropriate permits to reflect the changes. If you have any questions, please contact me at 850/921-9523.

Sincerely,

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/al

Cc: Bill Thomas, DEP SWD
Hamilton Owen, DEP PPSO
Karen Collins, Manatee County

US Environmental Protection Agency / Acid Rain Program

Plant Summary by Unit

Manatee Plant Florida

BOILER ID	BOILER TYPE	FUEL TYPE	NAMEPLATE CAPACITY	PEAKING?	CONTROLS		
					SO ₂	NO _x	NO _x INSTALL DATE
PMT1	DB	OIL	863	--	U	U	--
PMT2	DB	OIL	863	--	U	U	--

DB=Dry Bottom Wall-Fired (Front, Rear or Opposed) U=Uncontrolled

View Data for:

1996 NOx Data 1997 NOx Data SO2 Data CO2 Data

State Map National Map Help

[EPA](#) | [OAR](#) | [Acid Rain Program](#) | [Contact Us](#)http://www.epa.gov/acidrain/emission/fl/6042_sum.htm

Last updated May 28, 1999

US Environmental Protection Agency / Acid Rain Program

Plant Summary by Unit

Martin Plant Florida

BOILER ID	BOILER TYPE	FUEL TYPE	NAMEPLATE CAPACITY	PEAKING?	CONTROLS		
					SO ₂	NO _x	NO _x INSTALL DATE
PMR1	DB	OIL, G	863	--	U	LNB	--
PMR2	DB	OIL, G	863	--	U	LNB	--
HRSG3A	CC	G, D	250	--	U	O	--
HRSG3B	CC	G, D	250	--	U	O	--
HRSG4A	CC	G, D	250	--	U	O	--
HRSG4B	CC	G, D	250	--	U	O	--

DB=Dry Bottom Wall-Fired (Front, Rear or Opposed) CC=Combined Cycle U=Uncontrolled
 LNB=Low NOx Burner Technology O=Other

View Data for:

1996 NOx Data 1997 NOx Data SO2 Data CO2 Data

State Map National Map Help

[EPA](#) | [OAR](#) | [Acid Rain Program](#) | [Contact Us](#)

http://www.epa.gov/acidrain/emission/fl/6043_sum.htm

Last updated May 28, 1999

Fold at line over top of envelope to

HN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mary G. Archer, QEP
FP & L
P.O. Box 14000
Juno Bch, FL 33408

4a. Article Number

Z 031 391 993

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X

8. Addressee's Address (Only if requested and fee is paid)

Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

Z 031 391 993

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Service to	
Mary Archer	
Street & Number	
FP & L	
Post Office, State, & ZIP Code	
Juno Bch FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
11-2-99	
FPL	
Manatee Plant	
Burner Change-out	

PS Form 3800, April 1995



FPL

Mr. Al Linero
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd. Tallahassee, Florida 32399-2400

RECEIVED

DEC 13 1999

BUREAU OF AIR REGULATION

**Re: FPL –Manatee Plant
Proposed Burner Change-out
Response to Manatee Burner Replacement**

Dear Mr. Linero:

I am writing in response to your letter of November 1, 1999 on the referenced subject. FPL continues to believe that replacement of the burners at Manatee Units No. 1 and 2 is not a physical or operational change under the definition of "modification" found at Rule 62-210.200(188), F.A.C. Rather, it should be viewed as routine replacement of component parts under subparagraph 1.a. of that definition, and thus specifically not considered a "modification". Agreement on this point is not critical to the Department's handling of this matter, however, as the burner replacement will not in any event result in an increase in the actual emissions of any air pollutant from the Manatee Plant (see information provided below). Moreover, the new source review requirements are also inapplicable because the burner replacement constitutes a "pollution control project" under Rule 62-212.400(2)(a)2., F.A.C.

For these reasons, no application for a construction permit is required for the proposed burner replacement. To the extent revision of the Manatee Plant's air operation permit is considered appropriate, we suggest any change would be descriptive only, and implemented as an administrative amendment.

In your email of 11/28/99 two issues were raised that I will attempt to address here. The primary purpose of the project is to improve our visible emission performance and increase the overall reliability of these burners. These two items would constitute the primary goal of the project to be pollution reduction. The change-out of the burners will reduce the emissions, however, the cost of generation will not improve in relationship to the rest of the fleet of plants, so, the unit will not change in its dispatch order. The change to mechanical atomization will effect no change in the dispatch order of these units and consequently on their relative use. The combined changes will not change the use situation of the facility.

The following explanations are to address the questions in you letter of November 1, 1999.

1. Burner Type, Model, Diagram, Characteristics

The proposed burner is **CSL Low NOx Twin Register type**. This burner will be dual register design with separate sleeve type air dampers for the inner (primary) and outer (secondary) air passages (see Figure 1)

Page 1 of 3

FPL Manatee Plant Burner Replacement
December 9, 1999

The principal of staging air and fuel in reducing NOx levels is well documented, and the associated design features are incorporated on the air side and fuel side of the burners. The air staging is accomplished by the dual register (two-zone) design, which partitions the air into two distinct regions with different flow and swirl characteristics. The fuel staging is accomplished by the design of the fuel oil atomizer tip, which develops fuel lean and fuel rich zones of atomized fuel oil into a number of flame regions, as shown in Figure 2.

2. Atomizer Characteristics

The atomizer will be a wide range mechanical atomizer, which uses a tip shut-off, constant differential pressure (spill) principle to achieve best combustion performance throughout the entire load range. The atomizer stages the fuel into several rich and lean zones, as described above. This design will be very similar to the configuration currently in use at the FPL's Martin Units 1 & 2. The fuel pressure design **range will be 1,100 Psig supply and 700 Psig return.** The burner gun assembly will be provided with a flow-reversing valve (see Figure 3) to control the oil supply to oil return differential pressure for firing or stand-by conditions, making the use of cooling and/or purge steam unnecessary. There will be no steam atomization capability with the proposed burners.

3. Manner of Emissions Reduction

NOx emissions from fuel oil firing arise mainly from two sources: the oxidation of nitrogen in the combustion air (thermal NOx) and the oxidation of the nitrogen contained in the fuel (fuel NOx). The formation of thermal NOx is strongly dependent on temperature, whereas fuel NOx is largely controlled by the air-fuel mixing process and associated residence time.

The proposed low NOx burner design recognizes these factors by incorporating staged combustion techniques. Instead of simple injection and rapid mixing of fuel and air, as achieved with the currently installed Forney burner, the air will be split into streams by the burner register, offering independent air staging. In addition, the fuel will be split into concentrated and weak flow streams to produce fuel rich and fuel lean flame regions, as previously discussed. Although the fuel will be staged into rich and lean zones for NOx reduction, the overall atomization quality (droplet size) will be reduced to achieve better burn-out. This design approach will not only reduce NOx emission (particularly at high loads) but also improve combustion performance from current conditions, which will result in a net reduction of opacity and CO emissions, as indicated in our Notice of Intent on 18-Oct-99. Due to the improvement in opacity and CO emissions, it is expected that particulate emissions will improve slightly. No increase is anticipated in the acid smut or any SOx related emissions since the sulfur content in the fuel and excess air levels will remain the same.

4. Low Load Emission Impacts

There will be no increased emissions at low loads.

Martin Plant and Manatee Plant Proposed Burners, Fuel Capability, NOx Emissions, Relative Use

The burners presently used at the Martin Plant units are characterized as "Low NOx Burners (LNB's)"; this is a correct designation. "LNB's" is the proper designation for the proposed burners at the Manatee Plant.

The inherent design of the proposed burners, not a request for options from FPL, allows for natural gas compatibility as stated in our notice of intent. The present single fuel capability is retained, since there is no alternative fuel supply available and any fuel change would require permit modifications for this fuel type addition.

The lower Martin Plant NOx emissions are not the result of low NOx burners alone, but in conjunction with the dual-fuel capability.

The relative differences in heat input from Martin Plant 863 MW units and Manatee Plant 863 MW units are primarily due to differences in utilization based on dispatch requirements. The Martin and Manatee Plant four 863 MW units are dispatched based on fuel economics. Fuel market fluctuations between natural gas and fuel oil will dictate which units run first and longest. The change to mechanical atomization will effect no change in the dispatch order of these units and consequently on their relative use.

Thank you for your assistance in clarification of this issue for the Department. If you require any additional information, please do not hesitate to call me at 561-691-7057.

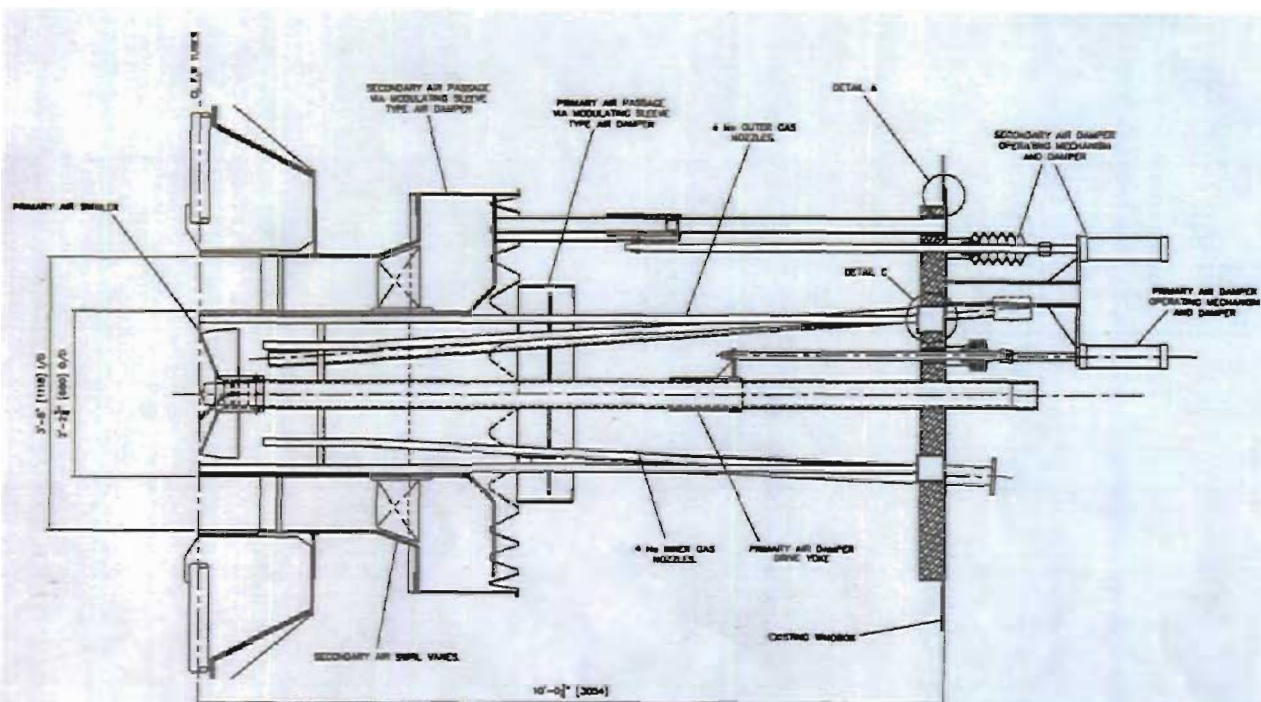
Sincerely,



Mary J. Archer, QEP
Principal Environmental Specialist
Florida Power & Light Company

cc: Florida Southwest District DEP – Jerry Kissel
cc: Manatee County – Air Quality Management Division

cc: Manatee Co.
SWD
C. Inapell



SECTIONAL VIEW ON B-B

ABB Combustion Services Ltd

Figure 1 – CSL Twin Register Low NOx Burner Details

Low NOx oil flame

Lobed (cruciform) atomiser



ABB Combustion Services Ltd

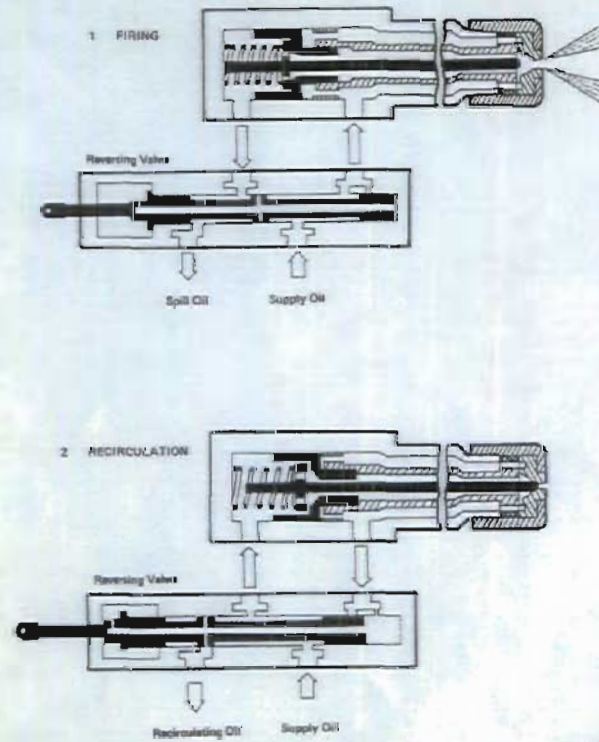
Combustion Systems

ABB ALSTOM
POWER

Figure 2 – Low NOx Flame Pattern

Diagram of oil valve & gun

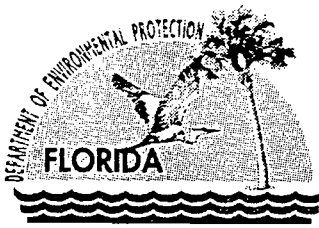
**ABB ALSTOM
POWER**



CS00723

ABB Combustion Services Ltd

Figure 3 – Gun & Reversing Valve Details



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

December 21, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mary J. Archer, QEP
Environmental Services Department
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408

Re: FPL – Manatee Plant
Project: Burner Replacement for Units 1 and 2
DEP File No. 0810010-005-AC
ARMS ID No. 0810010, Emissions Units 001 and 002

Dear Ms. Archer:

This letter responds to your original request received October 25, 1999 to replace burners at the Manatee Plant on Unit 2 in the spring of 2000 and on Unit 1 in the fall of 2000. The Department received additional information from FPL on December 13, 1999 regarding this request.

Background

Florida Power & Light Company (FPL) operates a steam electric plant in Manatee County located at 19050 State Road 62 in Parrish, Florida. Units 1 and 2 at this plant are fossil fuel (oil) fired steam generators, which were originally equipped with mechanical-atomizing burners. In 1994/1995, FPL replaced the mechanical atomization with steam atomization in these units without obtaining any air permits or prior Department approval. FPL states that the purpose of the 1994/1995 change was to increase the combustion efficiency of the burners.

Current Request

FPL proposes to replace the existing "Forney" steam-atomizing burners with new mechanically atomized, low NOx burners (LNB) manufactured by ABB Combustion Services, Ltd. Apparently, replacement parts for the current burners are difficult to acquire. FPL identifies the primary purpose of the burner replacement project as increasing the reliability of the burners and reducing plume opacity. FPL's Martin Plant in Indiantown has operated similar steam generators with the new burners since 1985. Based on this experience, FPL also anticipates that this project will result in the following:

- A decrease in NOx emissions due to the air and fuel staging design of the low NOx burners;
- A decrease in CO emissions due to more complete combustion resulting from better fuel atomization;
- Perhaps a slight decrease in particulate matter emissions due to more efficient combustion; and
- A reduction of 30 to 37 million gallons of water per year, currently needed for steam atomization.

"More Protection, Less Process"

Printed on recycled paper.

Comments

The Department received comments from DEP's Southwest District Office. The district expressed concerns about the possibility of increased particulate matter or acid smut emissions. Apparently, the district office received several complaints regarding soot fallout in 1994/1995. The number of complaints appeared to decrease with the addition of steam atomization.

Conclusion

The Department has reviewed the available information regarding FPL's request and authorizes the replacement of the existing burners with Model CSL Twin Register Low NOx Burner manufactured by ABB Combustion Services Ltd. This authorization does not recognize any changes to accommodate any fuels not currently authorized by permit. The authorization is granted solely for the proposed burner replacements on Units 1 and 2 at the Manatee Plant and is based on the specific information provided by FPL (attached) and the items presented below:

- The primary purpose of the project is to increase reliability of the burners and decrease the plume opacity. FPL identifies this project as routine maintenance/replacement for the existing units. The burner replacements are not part of a larger project that could be construed as a life extension project.
- The dispatch order and relative use of Units 1 and 2 will not change as a result of this project.
- The inherent design of the proposed burners incorporates compatibility with natural gas. FPL acknowledges that Manatee Plant Units 1 and 2 are single-fuel units and that *any* fuel change would require appropriate construction permit modifications.
- FPL certifies that this project will not result in an increase in emissions. Any emissions decreases resulting from this project are coincidental and not subject for use as a future net emissions decrease.

To provide reasonable assurance that no emissions increases occurred as a result of this project, FPL shall provide the following additional information.

1. In accordance with the procedures described in Appendix C of 40 CFR 60, FPL shall conduct emissions performance tests for carbon monoxide (EPA Method 10) and particulate matter (EPA Method 5) within 60 days of completing the burner replacements for each unit. A report indicating the results of the emissions performance tests shall be submitted to the Department no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. In addition, NOx and opacity data from the continuous monitors collected during each CO and PM test runs shall be summarized and included in the report to the Department for review.
2. FPL shall submit information regarding the replacement equipment to the Title V Section of the Bureau of Air Regulation and obtain the appropriate Title V revision, as necessary.

A copy of this letter shall be filed with all current air permits and shall become parts of those permits. This permitting decision is issued pursuant to Chapter 403, Florida Statutes.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a

petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

Mediation is not available in this proceeding.

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

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is

defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

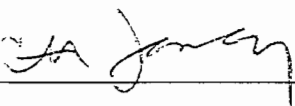
Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this order will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

If you have any questions regarding this letter, please contact Al Linero or Jeff Koerner at 850/488-0114.

Executed in Tallahassee, Florida.

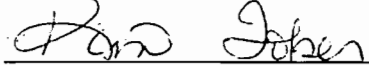

C.H. Fancy, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12-22-99 to the person(s) listed:

Ms. Mary Archer, FPL*
Mr. Jerry Kissel, Southwest District Office DEP
Chair, Manatee County B.C.C.
Clarence Troxell*
Gregg Worley, EPA

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


(Clerk) 12-22-99
(Date)

Fold at line over top of envelope to

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1. ☐ Addressee's Address
- 2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Clarence Troxell
3321 Lakeside Circle
Parrish, FL 34219

4a. Article Number

2 031 391 910

4b. Service Type

- ☐ Registered ☒ Certified
- ☐ Express Mail ☐ Insured
- ☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

X *Clarence Troxell*

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

2 031 391 910

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to		<i>Clarence Troxell</i>	
Street & Number		<i>3321 Lakeside Circle</i>	
Post Office, State, & ZIP Code		<i>Parrish FL</i>	
Postage	\$		
Certified Fee			
Special Delivery Fee			
Restricted Delivery Fee			
Return Receipt Showing to Whom & Date Delivered			
Return Receipt Showing to Whom, Date, & Addressee's Address			
TOTAL Postage & Fees	\$		
Postmark or Date	<i>12-22-99</i>		
<i>0810010-005-AC</i>			

PS Form 3800, April 1995

BEST AVAILABLE COPY

Is your RETURN ADDRESS completed on the reverse?

- Attach a permit.
- Write "Return Receipt Requested" on the back of the article.
- The Return Receipt will show to whom the article was delivered and the date delivered.

- ☐ Addressee's Address
 - ☐ Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
 Mary Archer, QEP
 Environmental Services Dept
 F&L
 P.O. Box 14000
 Juno Beach, FL
 33408

4a. Article Number
 Z 031 391 909

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)

X

PS Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

Z 031 391 909

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to		Mary Archer
Street & Number		F&L
Post Office, State, & ZIP Code		Juno Beach FL
Postage	\$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	
Postmark or Date		12-22-99
		0810010-005-AC

PS Form 3800, April 1995

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mary J. Archer, QEP
Environmental Services Department
Florida Power & Light Company.
PO Box 14000
Juno Beach, FL 33408

2. Article Number (Copy from service label)

7000 2870 0000 7028 2805

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent

☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes

☐ No

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

U.S. Postal Service

CERTIFIED MAIL RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage

\$

Certified Fee

Return Receipt Fee
(Endorsement Required)

Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees

\$

Postmark
Here

Sent To

Mary J. Archer

Street, Apt. No., or P.O. Box No.

PO Box 14000

City, State, ZIP+4

Juno Beach, FL 33408

PS Form 3800, May 2000

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. William Geases
 FP & L - Manatee Plant
 19050 Hwy 62
 Parrish, FL

34219-9220

2. Article Number (Copy from service label)

Z 341-355 291

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

GALE KINNE 5-19-00

C. Signature

X Gale Kinne

☐ Agent
☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes
☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

Z 341 355 291

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	William Geases
Street & Number	FP & L - Manatee P.
Post Office, State, & ZIP Code	Parrish FL
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	5-17-00
081001D-005-AC	
Burner Replacement 142	

PS Form 3800, April 1995

Fold at line over top of envelope to

Return Address completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mary G. Archer, QEP
FPL
PO Box 14000
Juno Bch, FL 33408

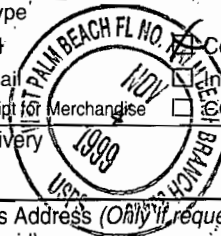
4a. Article Number

Z 031 391 993

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery



5. Received By: (Print Name)

X *[Signature]*

8. Addressee's Address (Only if requested and fee is paid)

Form 3811, December 1994

102595-98-B-0229

Domestic Return Receipt

Thank you for using Return Receipt Service.

Z 031 391 993

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Mary Archer	
Street & Number	
FPL	
Post Office, State, & ZIP Code	
Juno Bch FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
FPL 11-2-99	
Manatee Plant	
Burner Change-out	

PS Form 3800, April 1995