

Jeb Bush  
Governor

# Department of Environmental Protection

Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619

David B. Scrubs  
Secretary

## FACSIMILE TRANSMISSION SHEET

DATE 11-21-03

TO: TRINA VIEIHAUER

Department Dam

Phone \_\_\_\_\_ Fax \_\_\_\_\_

FROM: JERRY KISSEL

DEP Southwest District Office - Air Program  
Phone: (813) 744-6100 (SunCom 512-1042) Ext. \_\_\_\_\_

OPERATOR: \_\_\_\_\_

SUBJECT: \_\_\_\_\_

Total Number of Pages, Including Cover Page: 2

DEP SWD AIR PROGRAM FAX NUMBERS: (813) 744-6458  
(Suncom) 512-1073

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

*Printed on recycled paper.*

Subj: Nov. 25th meeting  
Date: 11/21/03 1:25:02 PM Eastern Standard Time  
From: Elihu451  
To: Gerald.Kissel@DEP.State.FL.us

*Sorry!*

Dear Gerry,

This letter confirms our conversation of a few minutes ago. We hereby request the pleasure of your company at a meeting of the Manatee County Clean Air Coalition on Tuesday, November 25, 2003 at 4PM. Location: Rosedale Golf & Country Club, East, Bradenton, Florida 34211.

Directions: One quarter mile East of intersection of I-75 and SR 70. Then, East on Route 70 At Hess Station turn left. Meeting is being held in the 19th Hole Meeting Room. At the security gate state your name and purpose of visit. Your name should be on guard's list.

There will be reps there from Sierra Club, Manasota 88, National Environmental Trust, MACAP, and FPL. Discussions on monitoring are expected to take place, particularly Nox emissions, and opacity regarding "real time".

In a few minutes I'll be faxing material to you.

Thank you!

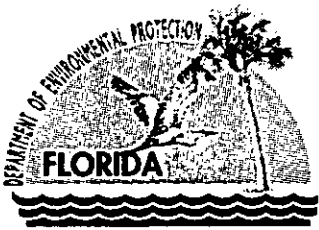
Clarence Troxell

*RCVD. - EMISSIONS DATA, NEWSPAPER ARTICLES, ETC.*

*-JK 11/21*

*FPL*

*Manatee*



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

October 22, 2003

Robert Minning  
R.C. Minning & Associates, Inc.  
1135 S. Pasadena Ave. Ste. 223  
St. Petersburg, Florida 33703

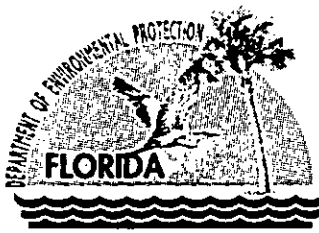
Dear Bob,

I wanted to thank you for your assistance with our Title V Renewal public meetings in Riviera Beach and Manatee County. I thought both meetings went extremely well and I appreciate your time and effort in making it a success.

Sincerely,

Trina Vielhauer

cc. Scott Sheplak



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

October 22, 2003

Rob Brown  
Manatee County Environmental  
Management Department  
Air Quality Division  
202 Sixth Avenue East  
Bradenton, Florida 34208

Dear Rob,

I wanted to thank you for your assistance with DEP's FPL Manatee Title V Renewal public meeting. I thought the meeting went extremely well and I appreciate your time and effort in making it a success.

Sincerely,

Trina Vielhauer

cc. Scott Sheplak



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

October 22, 2003

Jerry Kissel  
Southwest District Office-Air  
Florida Department of Environmental Protection  
3804 Coconut Palm Drive  
Tampa, Florida 33619

Dear Jerry,

I wanted to thank you and Joel for your assistance with our FPL Manatee Title V Renewal public meeting. I thought the meeting went extremely well and I appreciate your time and effort in making it a success.

Sincerely,

Trina Vielhauer

cc. Scott Sheplak  
Joel Smolen, SWD

This is a printer friendly version of an article from [www.heraldtribune.com](http://www.heraldtribune.com)  
To print this article open the file menu and choose Print.

Article published Oct 16, 2003

## High pollution levels at FPL's Parrish plant are a health threat

For many years, Florida Power & Light Co. and the Florida Department of Environmental Protection have abused the citizens of Manatee and Sarasota counties with the operation of FPL's massive power plant in Manatee.

In the 1990s, FPL tried to introduce the use of Orimulsion, a manufactured toxic fuel from Venezuela. Its use was approved and endorsed by the DEP. But, through the efforts of many people, the use of Orimulsion was defeated.

Unfortunately, the time has come again when such grass- roots actions must be repeated. FPL and the DEP haven't learned, and our pols in Tallahassee haven't helped.

For example, at a meeting conducted by FPL in 1994, Lamar Parrish, a citrus grove owner and a former member of the Manatee County Commission, raised the issue of citrus burn. Jerry Kirk, general manager of the Orimulsion project, said FPL was aware of the problem and was working with the county to find the causes.

Kirk said the Martin County plant, which is just about on the same latitude as the Manatee plant and is surrounded by orange groves, did not have problems with citrus burn. He said "there's never been any indication of that there, and we are burning the same oil there as we're burning here at the Manatee plant, and yet this is the only area where we can find that kind of problem."

FPL misled the public. Since 1985, FPL has been burning natural gas in combination with fuel oil at the Martin plant. That makes a big difference.

The Manatee plant didn't have natural gas then, but it does now. If, in the year 2002, FPL had operated the Manatee plant on the same basis as Martin, it could have reduced the nitrogen oxide emissions by 45 percent and the amount of sulfur dioxide by 53 percent. Again, in 2002, the Manatee plant was the dirtiest plant in the entire FPL system. This one plant produced 19.8 percent of the nitrogen oxide and 33 percent of the sulfur dioxide of all the FPL plants.

At a Manatee County Commission meeting Sept. 30, FPL officials said a 33 percent reduction in emissions is likely using a process called "reburn" on the No.1 and No.2 units, but they said they are hesitant to commit to it in the upcoming renewal of the plant permit. Even if they can reach that 33 percent objective, the No.1 and No.2 units at Manatee will still be higher than the No.1 and No.2 units at Martin.

Talking about the reburn process on July 24, 2002, Allan Bedwell, DEP deputy secretary, told a meeting of the Coalition for Clean Air, "I have not seen that anywhere else in the country."

### **So we're going to be guinea pigs again.**

The 30-day rolling average in monitoring pollution from the Manatee No.1 and No.2 stacks should also be abandoned. The reporting should occur on an hourly and daily basis, the same as for Martin No.1 and No.2.

Changing to 30-day rolling averages has allowed high amounts of nitrogen oxide emissions. It doesn't take a medical genius or a research physicist to determine that detrimental effects would

be greater. It also explains why the Manatee units' emissions are so much higher than any of the other FPL plants.

On Sept. 20, USA Today reported: "Health studies show that inhaling soot particles, which can be 40 times smaller than a grain of salt, contributes to heart problems, lung cancer and asthma. Soot can get deep into the lungs and then the bloodstream. It can even lead to irregular heartbeats and trigger heart attacks. People with heart and lung disease, children with asthma and seniors are considered most vulnerable to the effects of soot."

FPL's Port Everglades plant in Broward County is going through a technical evaluation, which involves emissions of particulate matter. Because of concern over the amount of particulates from that plant, FPL has agreed to lower the levels. There will be an expected reduction of 4,800 tons per year. And the visible emissions will be reduced from 40 percent to 20 percent opacity.

In 2002, Port Everglades burned 5,781,465 units of oil. Manatee burned 9,964,943 units. Martin has been regulated to a 20 percent opacity level; Manatee is regulated at 40 percent opacity.

We in Manatee and Sarasota are being kicked around by FPL and the DEP.

**We want clean air. The public must speak out.**

Clarence Troxell is a member of the Clean Air Coalition, a group composed of local environmental organizations. He lives in Parrish.

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# HERE'S THE FAX!!!

TO: Ms Cindy PhillipsCOMPANY: F.D.C. IncFAX #: 1 - (830) 922 6979FROM: Clarence TroxellDATE: 10/17/03# OF PAGES INCLUDING COVER SHEET: 2COMMENTS: Tried to fax this article toScott Sheplak this morning but itwouldn't go thru. On the accompanyingfax letter I said, "Let's do something -don't rubber stamp!" Please give copyIF ALL PAGES ARE NOT RECEIVED, PLEASE CONTACT CLARENCE TROXELL  
AS SOON AS POSSIBLE:

FAX NUMBER: (941) 776-2047

to Trina! Thank you.Clarence



# High pollution levels at FPL's Parrish plant are a health threat

For many years, Florida Power & Light Co. and the Florida Department of Environmental Protection have abused the citizens of Manatee and Sarasota counties with the operation of FPL's massive power plant in Manatee.

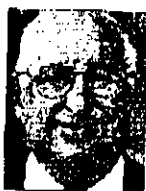
In the 1990s, FPL tried to introduce the use of Orimulsion, a manufactured toxic fuel from Venezuela. Its use was approved and endorsed by the DEP. But, through the efforts of many people, the use of Orimulsion was defeated.

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For example, at a meeting conducted by FPL in 1994, Lamar Parrish, a citrus grove owner and a former member of

**CLARENCE  
TROXELL**

GUEST  
COLUMNIST



the Manatee County Commission, raised the issue of citrus burn. Jerry Kirk, general manager of the Orimulsion project, said FPL was aware of the problem and was working with the county to find the causes.

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At a Manatee County Commission meeting Sept. 30, FPL officials said a 33 percent reduction in emissions is likely using

a process called "scrubbing" of the No. 1 and No. 2 units. But they said they are resistant to commit to it in the upcoming renewal of the permit.

Even if they are reaching 65 percent objective, the No. 1 and No. 2 units at Manatee will still be higher than the No. 1 and No. 2 units at Martin.

Talking about the "scrubbing" process on July 24, 2001, Alan Bedwell, DEP deputy secretary, told a meeting of the Coalition for Clean Air: "I have not seen that anywhere else in the country."

So we're going to have to scrub again.

The 30-day rolling averages in monitoring pollution from the Manatee No. 1 and No. 2 stacks should also be abandoned. The reporting should occur on an hourly and daily basis, the same as for Martin No. 1 and No. 2.

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We in Manatee and Sarasota are being kicked around by FPL and the DEP.

We want clean air. The public must speak out.

Clarence Troxell is a member of the Clean Air Coalition, a group composed of local environmental organizations. He lives in Parrish.

*Herald-Tribune*

*Tallahassee - Oct 16, 2003*



## ***FPL's COMMITMENT TO CLEAN AIR***

**PUBLIC WORKSHOP WITH THE  
MANATEE COUNTY BOARD OF COUNTY  
COMMISSIONERS  
SEPTEMBER 30, 2003**

**PAUL PLOTKIN PLANT GENERAL MANAGER FOR  
FPL'S MANATEE POWER PLANT.**

***FPL IS RECOGNIZED NATIONALLY FOR ITS  
ENVIRONMENTAL PERFORMANCE***

- **IN 2000 AND 2002 INNOVEST  
RANKED FPL ENVIRONMENTALLY  
THE BEST AMONG THE NATION'S  
TOP 30 UTILITIES.**

- "FPL received a rating of AAA,  
ranking 1 out of 30 Electric  
Companies in this sector."

"As consistently demonstrated  
in many industry sectors,  
environmental leadership by  
companies such as FPL reflects  
visionary management that  
ultimately leads to financial and  
stock out-performance."

FRANK DIXON - INNOVEST  
MARCH 2000



2

**INNOVEST IS A COMPANY THAT PROVIDES  
FINANCIAL ANALYSES ON COMPANIES THAT ARE  
HIGHLY REGARDED ENVIRONMENTALLY.**

**THEIR PREMISE IS THAT SOUND  
ENVIRONMENTAL STEWARDSHIP IS AN ASSET  
WHICH INCREASES THE VALUE OF A COMPANY BY  
LOWERING ENVIRONMENTAL EXPOSURE AND  
RISK.**

**FRANK DIXON IS THE PRESIDENT OF INNOVEST**

***FPL IS RECOGNIZED NATIONALLY FOR ITS  
ENVIRONMENTAL PERFORMANCE***

- **FPL GROUP WAS NAMED THE 2003 WINNER OF THE EDISON AWARD, THE ELECTRIC POWER INDUSTRY'S HIGHEST HONOR.**

- "FPL Group's winning strategy clearly demonstrates that environmental excellence and outstanding financial performance can go hand in hand."

THOMAS R. KUHN - PRESIDENT  
EDISON ELECTRIC INSTITUTE  
JUNE 2003



***FPL's MISSION IS MANDATED BY  
F.P.S.C AND F.D.E.P. REQUIREMENTS***

- **FPL MUST PROVIDE ELECTRICITY TO ALL CUSTOMERS DESIRING CONNECTION WITHIN ITS SERVICE TERRITORY**
- **FPL MUST HAVE ADEQUATE CAPACITY TO MEET THE DEMANDS OF THE HIGHEST PEAK PERIODS**
- **FPL MUST PROVIDE ELECTRICITY THAT IS STABLE IN VOLTAGE AND FREQUENCY**
- **FPL MUST OPERATE ITS SYSTEM TO UTILIZE AVAILABLE LOW COST FUEL RESOURCES**
- **FPL MUST OPERATE IN A MANNER THAT IS IN COMPLIANCE WITH ALL ENVIRONMENTAL PERMIT CONDITIONS**



**These are MANDATED REQUIREMENTS of the Florida Public Service Commission and the Florida Department of Environmental Protection.**

**The bottom two are essential to our discussion today.**

**That we are required to operate our system to utilize AVAILABLE, LOW COST FUEL RESOURCES.**

**And that we must operate our facilities in compliance with all environmental permit conditions.**

## **"GRANDFATHERED" IS A MISNOMER WHEN APPLIED TO MANATEE 1&2**

- MANATEE 1&2 ARE REGULATED AS EXISTING SOURCES**

REGULATORY CATEGORY	UNITS	NO <sub>x</sub> EMISSION LIMIT	COMPLIANCE METHOD	AVERAGING PERIOD
EXISTING SOURCE PRE-1971 [62-296.405 F.A.C.]  RAO Units	EE COBBLER RD 1	0.7 LB/MMBTU	C.E.M.	30 DAY
	EE COBBLER RD 3	0.7 LB/MMBTU	C.E.M.	30 DAY
	COOL THORNTON 1	0.7 LB/MMBTU	C.E.M.	30 DAY
	MANATEE 1&2	0.7 LB/MMBTU	C.E.M.	30 DAY
	SEMI RA 1&2	0.6 LB/MMBTU	C.E.M.	30 DAY
	PORT FALGOUT 1&2	0.5 LB/MMBTU	C.E.M.	30 DAY
NEW SOURCE Subpart D - Aug 18, 1971 - Sept. 18, 1978 [40 C.F.R. Part 60]	COOL THORNTON 2	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
	PE CRYSTAL RIVER 1&2	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
	COOL MOUNTAIN 1&2	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
	MARTIN 1&2	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
	COOL VERMONT	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
	COOL PINE 1&2	0.7 LB/MMBTU	ANNUAL TEST	1 YEAR
NEW SOURCE Subpart Da - Post - Sept. 18, 1978 [40 C.F.R. Part 60]	EE COBBLER RD 1	0.6 LB/MMBTU	C.E.M.	30 DAY



5

There were some comments made about HOW THE MANATEE PLANT was permitted so the next two slides will address the facts. This slide demonstrates how the PERMIT RULES were promulgated.

The rules that apply to power plants vary depending on the date the facilities initiated construction. The left column describes the Regulatory Category.

AND the Manatee Units along with 3 other units in Florida were EXCLUDED from REGULATION under Federal rules. These units WERE TO BE considered "grandfathered" by the Clean Air Act.

However, Florida developed an "Existing Sources" category under state rules with applicable emissions standards to prohibit those units from "falling through the crack".

Florida's NO<sub>x</sub> rules provided for a 30-day averaging period for existing sources. That STANDARD IS the same as Federal standards for the newest conventional units. (The Subpart Da Units or the bottom row - POST 1978 )

AND then there was a seven year period where a group of New Sources including Martin 1 & 2 fell under different rules.

## ***CEM's vs. ANNUAL 3-HOUR TEST AS MANATEE PLANT'S COMPLIANCE METHOD***

- In January 1994, anticipating that CEM's would be fully operational beginning in first quarter of 1995, Manatee Plant requested that FDEP change the Plant NO<sub>x</sub> emission compliance methodology from an annual 3-hour test to the certified CEM's based on a 30-day rolling average.
- FDEP determined that a 30-day rolling average was consistent with current rules and issued the permit modification in March of 1994.
- Manatee Plant begins using the CEMs as the compliance method for NO<sub>x</sub> and files it's first quarterly report in April 1995.



6

**CONTINUOUS MONITORING** is just that....When the unit is operating, the emissions are continuously **MONITORED AND RECORDED**.

**CONTINUOUSLY MONITORING EMISSIONS** is more restrictive than the annual emissions compliance test.

**THESE EMISSIONS MONITORS** are operated, maintained, calibrated, and audited according to the federal standards of the Clean Air Act for CEM systems which assures their accuracy, repeatability and reliability.

## ***CONTINUOUS EMISSION MONITORS (CEMS) HISTORY AND OPERATION***

- CEM's consist of sampling systems, analyzers, and computer data acquisition systems which continually analyze, log and communicate emission data.
- EPA required that CEM'S be installed and operational in first quarter of 1995 for all Phase II Power Plants regulated under the Acid Rain Program.
- CEM's are required to operate according to an approved monitoring plan and per the requirements of 40 CFR Part 75. Quality Assurance testing activities include: daily automatic calibrations, quarterly linearity, annual relative accuracy testing and fuel measuring system calibrations and gas orifice inspections.
- CEM's are required to be available greater than 90% of the time. Manatee Plant's current availability is 99%.
- CEM data is collected in the data acquisition system and transmitted to the control room on a real time basis so that operators can monitor emissions and make continuous process improvements.



7

**The CEMS are required to operate according to an approved monitoring plan.**

**AND Our quality assurance processes include DAILY automatic calibrations, QUARTERLY linearity checks and ANNUAL accuracy testing and certification.**

**CEMS are required to be available > 90% of the time and Manatee Plant's current availability is 99%.**

**The data is transmitted to our control room on a real time basis so that operators can monitor and make CONTINUOUS PROCESS IMPROVEMENTS.**



## **CONTINUOUS EMISSION MONITORS (CEMs) NO<sub>x</sub> CALCULATIONS**

- CEM data for NO<sub>x</sub> and the amount of fuel used is collected in the data acquisition system which calculates hourly averages of NO<sub>x</sub> reported in lbs/mmBtu. .
- Daily averages are calculated by averaging hourly NO<sub>x</sub> values for every hour within the day that the unit is operating. When the unit is not operating, these hours ARE NOT included in the average.
- The 30 day rolling average is the average of 30 operating days.
- The daily averages and 30 day rolling averages along with CEM availability are reviewed. The report is certified and submitted to the EPA and FDEP quarterly.



8

**Addressing the concerns that were raised about the 30 day rolling average.**

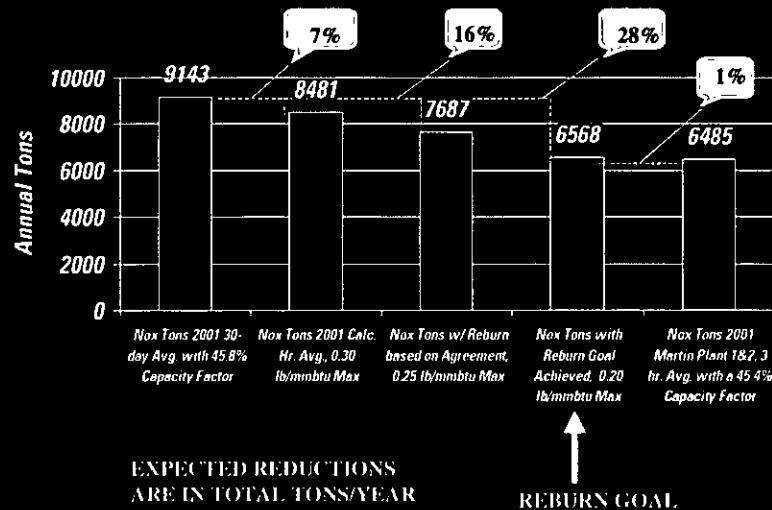
**The Quarterly CEM data is available for PUBLIC REVIEW in the AIR MARKETS section on the EPA web site -**

**ADDITIONALLY - Prior years HOURLY INFORMATION can be viewed and downloaded from the EPA web site. SO THE DATA IS AVAILABLE TODAY.**

### **BACKUP DATA:**

**[HTTP://WWW.EPA.GOV/AIRMARKETS/EMISSIONS/PRELIMARP/03Q2/032.FL.TXT](http://www.epa.gov/airmarkets/emissions/prelimarp/03Q2/032.fl.txt)**

## MANATEE PLANT'S 2001 NOX IMPROVEMENT COMPARISON'S



This slide addresses the Martin vs. Manatee NOx output comparison.

First Bar: 2001 total NOx tons with a 45.8% capacity factor. The 2001 actual scorecard data.

Second Bar: What the 2001 total NOx tons would have been if NO HOURLY AVERAGE was permitted to be above .3 lb/mmBtu.

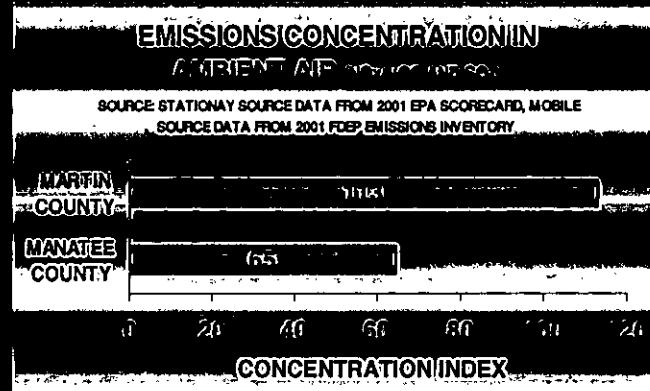
Third Bar: What the total NOx tons would be if we meet the CURRENT REBURN AGREEMENT. A 16% reduction in TOTAL TONS.

Fourth Bar: What the total NOx tons would be if we meet the REBURN GOAL mentioned in the current agreement. A 28% reduction in Total Tons.

The last Bar: is Martin Plant from 2001 with a slightly lower capacity factor than Manatee and their 3 hr. hourly Avg. SO OUR EXPECTATION IS THAT MANATEE OPERATES ON PAR LIKE MARTIN WITH THE USE OF REBURN TECHNOLOGY.

## **FPL's COMMITMENT TO CLEAN AIR**

- **THE ASSERTION THAT MANATEE PLANT CAUSES THE COUNTY'S AIR TO BE OF POORER QUALITY THAN MARTIN COUNTY'S AIR IS WITHOUT BASIS**



10

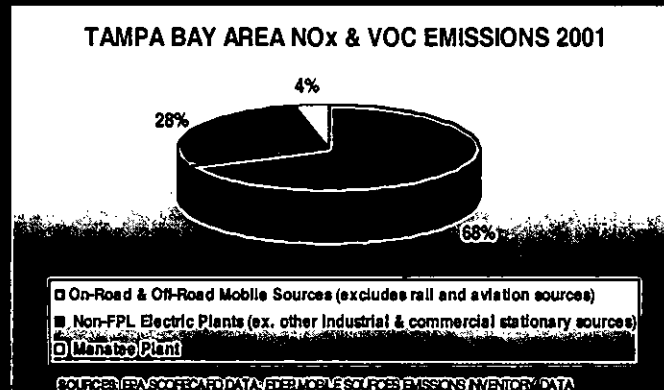
- Some have suggested that Manatee County's air is poorer than Martin County's air DUE TO THE DIFFERENCE IN ANNUAL EMISSIONS between the Manatee and Martin Plants.
- Comparisons on a county vs. county basis are NOT particularly meaningful due to the REGIONAL NATURE of air emissions. However, if one does make the comparison, it's clear to see that the concentration of emissions in Manatee County's ambient air is significantly less than Martin County. Even if one were to normalize the counties to equal areas, Manatee County still would have a lower Concentration Index than Martin County vs.
- The emissions in this graphic are NO<sub>x</sub>, VOCs, and SO<sub>2</sub> from FPL plants, and mobile sources in each county.

The emissions from the US Generating Plant in Martin county are not included in the comparison.....If it were, that would increase Martin's ambient air concentration even further.

NOTE - The concentration Index is annual tons of emissions per cubic mile of ambient air

## ***FPL's COMMITMENT TO CLEAN AIR***

- **MANATEE PLANT IS A SMALL SOURCE OF NO<sub>x</sub> & VOCs (OZONE PRECURSORS) TO THE REGION**



11

Manatee Plant's contribution of NO<sub>x</sub> and VOCs to the Tampa Bay region is about 4% of the total

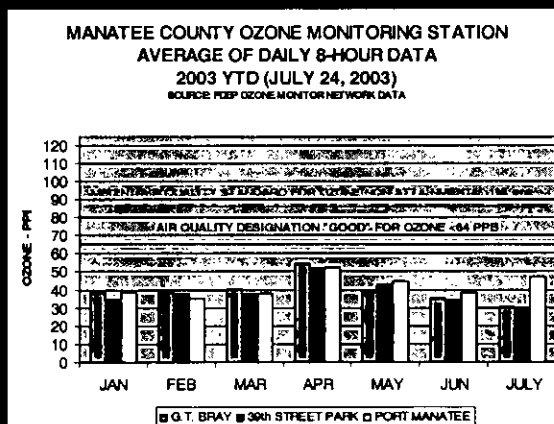
Vehicle emissions are the largest sources. Other mobile sources, i.e. aircraft and diesel locomotives are not included in this data, nor are refueling operations.

Other electric generating sources, i.e. co-gen. sources and waste to energy sources in the Tampa Bay area are not included in this data, nor are other small industrial /commercial sources (dry cleaners, medical waste incinerators, printing shops, fiberglass fabrication, etc.).

Including the other sources would make the Manatee Plant's contribution even less.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **OZONE LEVELS IN MANATEE COUNTY ARE TYPICALLY "GOOD" - "No Health Effects Are Expected" - EPA**



12

- As this graph represents - Manatee County has good air quality
- The average ozone levels at all of Manatee County's ambient air monitoring stations are good.
- "Good" in terms of the EPA's Air Quality Index (AQI) means less than 64 ppb and "No health effects are expected" - EPA
- The ozone levels are all below the threshold for non-attainment (85 ppb)
- Ozone levels are most influenced by mobile sources and climatic conditions. Fluctuations in the levels are driven mostly by climatic conditions.
- Any citizen can access the County Monitoring data on the FDEP's Florida Ozone Network Website and view the data:  
[.dep.state.fl.us/air/ozonenet.htm](http://dep.state.fl.us/air/ozonenet.htm)

## FPL's COMMITMENT TO CLEAN AIR

- EPA's RANKS AMBIENT AIR QUALITY RELATIVE TO THE HEALTH BASED STANDARDS via THE AIR QUALITY INDEX (A.Q.I.)



Air Quality Index (AQI): Ozone		
Air Quality Index (AQI)	Level of Health Concern	Cautionary Statements
0 - 50	Good	None
51 - 100	Moderate	Unusually sensitive people should consider reducing prolonged or heavy exertion outdoors.
101 - 150	Unhealthy for Sensitive Groups	Active children and adults, and people with lung disease, such as asthma, should reduce prolonged or heavy exertion outdoors.
151 - 200	Unhealthy	Active children and adults, and people with lung disease, such as asthma, should avoid prolonged or heavy exertion outdoors. Sensitive groups, especially children, should reduce prolonged or heavy exertion outdoors.
201 - 300	Very Unhealthy	Active children and adults, and people with lung disease, such as asthma, should avoid all outdoor exertion. Sensitive groups, especially children, should avoid prolonged or heavy exertion outdoors.
301 - 400	Hazardous	Everyone should avoid all physical activity outdoors.

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The AQI on any given day is available from the Manatee County Environmental Management Department's Air Quality Division.

The Current AQI Information is available on the Internet from the EPA ebsite.

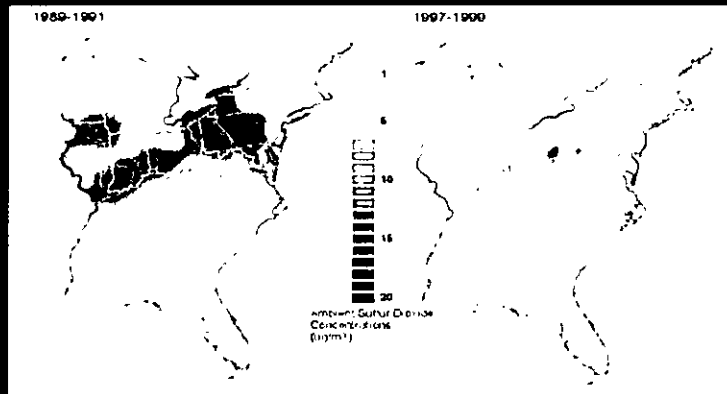
### BACK UP DATA:

EMD advertised phone number - 749-0079

EPA WEB SITE: <http://www.epa.gov/airno> / here/

## ***FPL's COMMITMENT TO CLEAN AIR***

- **Ambient SO<sub>2</sub> Concentrations from EPA CASTNet Data show Florida in excellent shape regarding Acid Rain potential**



- This is a comparison of SO<sub>2</sub> concentrations from the period of 1989-1991 and 1997-1999
- Florida's ambient air has the lowest levels of sulfur dioxide in the eastern U.S.
- There is no Acid Rain problem in Florida due to SO<sub>2</sub> emissions from utility sources, or any other sources.
- Else here in the Eastern U.S. ambient air SO<sub>2</sub> concentrations are improving.
- This data also confirms that the science behind EPA's health based standards and the resulting emissions limits in the Clean Air Act are well founded and correct.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **FLORIDA'S STANDARDS FOR SO<sub>2</sub> ARE STRICTER THAN THE NATIONAL STANDARDS**
- **ALL OF FLORIDA'S 29 MONITORS FOR SO<sub>2</sub>, INCLUDING MANATEE COUNTY'S MONITOR, WERE NO GREATER THAN 30% OF THE ANNUAL AVERAGE STANDARD**
- **MANATEE COUNTY'S ANNUAL AVERAGE SO<sub>2</sub> RANKS AMONG THE LOWEST OF THE 29 MONITORING STATIONS**

**SOURCE: FDEP AIR MONITORING REPORT - YEAR 2001**



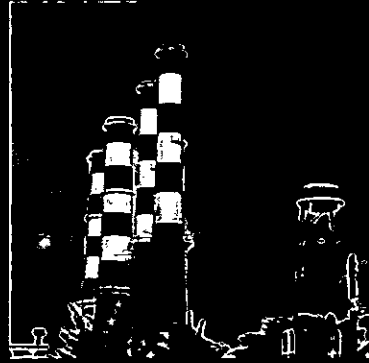
15

- **What the data tells us is that Manatee County's 2001 average ambient air SO<sub>2</sub> level as 3 ppb (Annual average standard = 20 ppb)**



## ***FPL's COMMITMENT TO CLEAN AIR***

- “....To put this in perspective, your statewide SO<sub>2</sub> emissions for all FPL facilities combined are now less than the SO<sub>2</sub> emissions from the single largest emitting individual facilities in the state during the middle to late 1990's....”

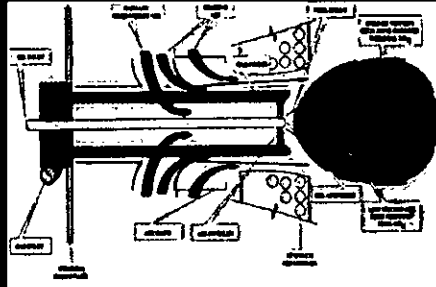


**FDEP DIVISION OF AIR RESOURCE  
MANAGEMENT - APRIL 2003**

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## ***FPL's COMMITMENT TO CLEAN AIR***

- **FPL VOLUNTARILY UPGRADED MANTATEE PLANT'S BURNERS WITH STATE OF THE ART LOW NO<sub>x</sub> BURNERS IN 2000 & 2001**



## ***FPL's COMMITMENT TO CLEAN AIR***

- **FPL VOLUNTARILY ADDED NATURAL GAS AS A PERMITTED FUEL FOR MANATEE UNITS 1&2 IN 2002 AND 2003**



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**Adding natural gas as a fuel option as a \$3.5 million dollar capital investment for Manatee Plant.**

**We no longer use light oil to start up our units. We use natural gas.**

**We are committed to use gas whenever gas is available and cost effective.**

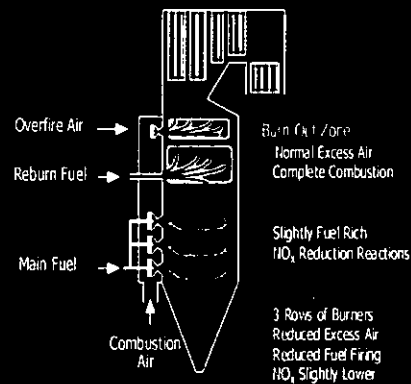
***And we understand that every million cu ft of gas burned displaces about 150 barrels of fuel oil.***

## ***FPL's COMMITMENT TO CLEAN AIR***

- **FPL WILL VOLUNTARILY INSTALL AN ADDITIONAL NO<sub>x</sub> PREVENTION TECHNOLOGY, REBURN, ON MANATEE UNITS 1&2**



Fuel Reburning Configuration



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FPL heard the concerns from Manatee County and others regarding the NO<sub>x</sub> and VOCs in the region, and voluntarily took action to help ensure that the Tampa Bay airshed would remain in compliance for ozone.

Although Manatee Plant's NO<sub>x</sub> and VOC contribution to the region is only about 4%, FPL is making a 32 million dollar investment to reduce emissions.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **REBURN HAS PROVEN ITSELF FOR OVER A DECADE AS MATURE TECHNOLOGY FOR NO<sub>x</sub> REDUCTIONS**
- **IT IS IN USE ON OVER 40 ELECTRIC GENERATING UNITS WORLDWIDE.....19 IN THE U.S. ALONE**
- **UNITS RANGE IN SIZE WORLDWIDE FROM 33 TO 887 MW**
- **NO<sub>x</sub> REDUCTIONS RANGE FROM 45% TO 77% DEPENDING ON THE PARTICULAR UNIT**
- **PRIMARY FUELS INCLUDE COAL, OIL, AND GAS**



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Reburn has proven itself for over a decade as a mature technology for NO<sub>x</sub> reductions.

It is in use on over 40 electric generating units worldwide.....19 in the U.S. Alone

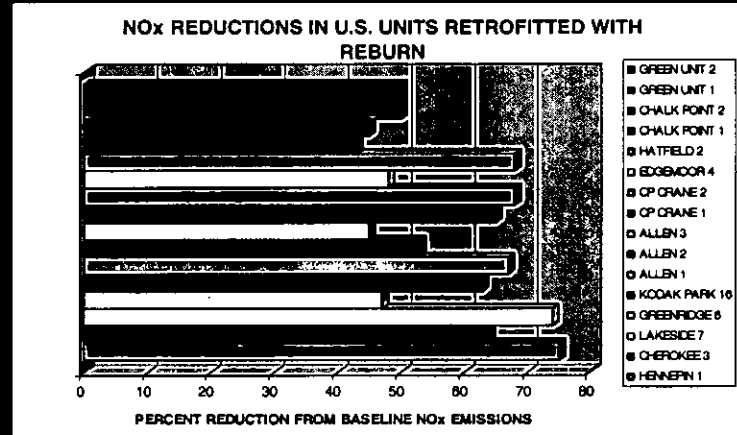
Units range in size and fuel worldwide from 33 to 887 m

NO<sub>x</sub> reductions range from 45% to 77% depending on the particular unit

Primary fuels in use include coal, oil, and gas

## ***FPL's COMMITMENT TO CLEAN AIR***

- **REBURN HAS SHOWN IMPRESSIVE NO<sub>x</sub> REDUCTIONS ON UNITS IN THE UNITED STATES SINCE 1990**



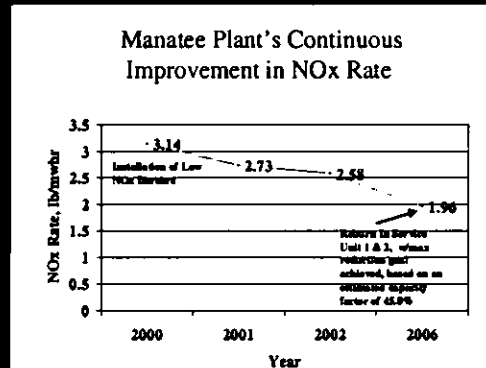
21

It has been said that Reburn is an "Experimental Technology that hasn't been proven on an 800 MW oil gas unit", while it hasn't been proven on a MANATEE LIKE UNIT, The same argument can be made for SCR. Additionally, the same argument could have been made for any of the units shown here until Reburn was installed and used.

The results clearly show that Reburn is a mature, effective means of NO<sub>x</sub> prevention.

## FPL's COMMITMENT TO CLEAN AIR

### MANATEE UNITS 1&2 HAVE SHOWN CONTINUOUS IMPROVEMENT IN THE NO<sub>x</sub> EMISSION RATE



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- **MANATEE PLANT** has continuously improved our NO<sub>x</sub> emission rate. This chart shows the NO<sub>x</sub> rate in lbs/MWhr. We have been able to make incremental improvements since we installed our Low NO<sub>x</sub> Burners.

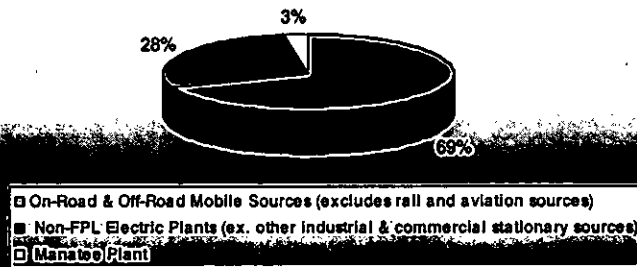
**Next** - The project goal for Reburn is to achieve a NO<sub>x</sub> emission rate on EITHER fuel, which is equivalent to the New Source Performance Standards for natural gas (0.2 #/mmbtu). Culminating in a reduced NO<sub>x</sub> Rate to 1.96 lbs/MWhr.

- We will continue with our commitment to work hard to discover opportunities that lower our emissions.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **INSTALLING REBURN WILL REDUCE MANATEE'S CONTRIBUTION OF NO<sub>x</sub> & VOC IN THE REGION TO 3%**

**TAMPA BAY AREA NO<sub>x</sub> & VOC EMISSIONS WITH  
MANATEE PLANT REBURN REDUCTIONS**

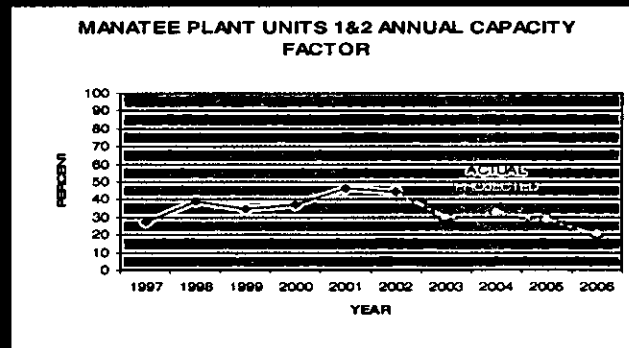


**Installing Reburn will reduce Manatee's contribution of NO<sub>x</sub> and OC in the region to about 3 .**



## ***FPL's COMMITMENT TO CLEAN AIR***

### **FUTURE CAPACITY FORECAST**



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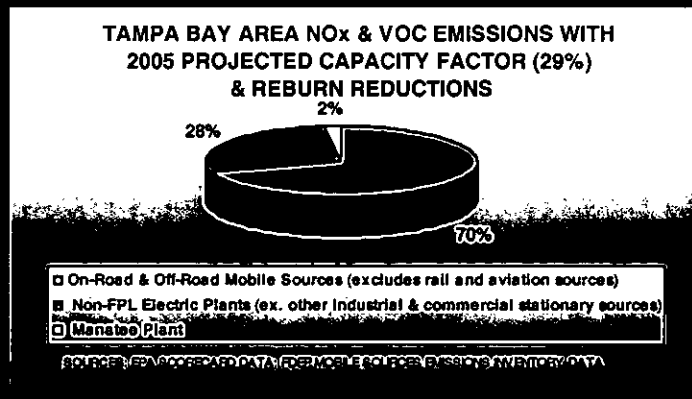
Manatee Units 1 2 are projected to run less often in the future, lessening their already small contribution to emissions in the region.

They will continue to be dispatched as intermediate, load-following units.

This is another confirmation that Reburn is the best choice as a NO<sub>x</sub> PREVENTION TECHNOLOGY for Manatee 1 2. Because SCR NO<sub>x</sub> removal technology is CLEARLY BETTER SUITED FOR BASE-LOADED UNITS.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **WITH MANATEE UNITS' 1&2 PROJECTED CAPACITY FACTOR AND THE INSTALLATION OF REBURN, THEIR CONTRIBUTION OF NO<sub>x</sub> & VOCs IN THE REGION IS 2%**

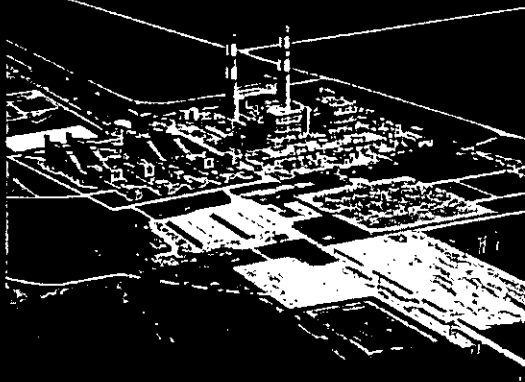


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With the projected reduction in capacity factor for Units 1 & 2 (29% in 2005), and the installation of Reburn, Manatee's contribution to the region's NO<sub>x</sub> VOCs will be about 2%.

## ***FPL's COMMITMENT TO CLEAN AIR***

- **MANATEE PLANT IS EXPANDING TO MEET THE REGION'S INCREASING NEED FOR POWER BY ADDING COMBINED CYCLE UNIT 3**



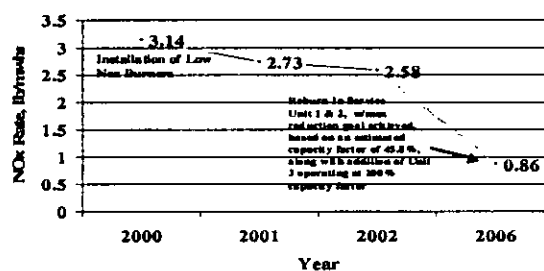
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We are expanding to meet the regions increasing need for power by adding 1100 MW's of combined cycle, unit 3, using the Best Available Control Technology.

## FPL's COMMITMENT TO CLEAN AIR

GREATER PLANT-WIDE REDUCTIONS IN NO<sub>x</sub> ARE EXPECTED  
WITH THE ADDITION OF UNIT #3

Manatee Plant's Continuous Improvement in  
NO<sub>x</sub> Rate  
Total Site Estimates



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With the addition of unit 3 and meeting our REBURN goal the total site emissions will improve to .86 lbs/MWhr

## ***MANATEE UNIT 3 EXPANSION PROJECT CONDITION OF CERTIFICATION***

FPL shall submit an annual report by April 15 to Manatee County reporting on the Economic Dispatch History of the past year of Manatee Unit 3, other similar combined cycle units operated by FPL and FPL's existing Manatee Units 1 & 2.

Upon request of the Board of County Commissioners, FPL shall make a presentation to the BOCC on it's annual report. The report shall also include an Annual Emissions Comparison demonstrating what would have occurred without Unit 3 generating, assuming Manatee Units 1 & 2 supplied the same megawatt hours.



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**At the recent county commission meeting the dispatch order of units 1, 2, and 3 came into question.**

**During the permitting process of unit 3, the county and Florida Power and Light created the stipulation shown here. That stipulation was adopted in the final order as a condition of certification.**

**It simply says that we will submit a report to the county on the Economic Dispatch History AND at your request we will make a presentation on the annual report.**