

For your information.....

PETER C. CUNNINGHAM
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June 24, 2002

BUREAU OF AIR REGULATION

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Clair Fancy, Jeff Koerner

To follow up our discussion last week, enclosed are:

1. Letter dated 1/26/76 from EPA Region IV to FPL determining Manatee Units 1 and 2 are not subject to federal NSPS.
2. Excerpts from COT Hopkins Title V permit showing both oil and natural gas are permitted fuels (Cond. III.B.3.) and that the NOx emission limit is 0.3 lb/mmbtu for oil and/or natural gas (Cond. III.B.12)
3. Excerpts from JEA Northside Title V permit showing both oil and natural gas are permitted fuels (Cond. III.A.3.) and that the NOx emission limit is 0.30 lb/mmbtu for oil and/or natural gas (Cond. III.A.12)

We will call you at 3:30 today as arranged.

Peter

6/24/2002 08:11

561-691-7049

FPL ENV SERVICES

PAGE 01/01



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1431 PEACHTREE ST., N.E.
ATLANTA, GEORGIA 30309

January 26, 1976

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Env'l. Protection

Mr. W. J. Barrow, Jr.
Florida Power and Light Company
Post Office Box 013100
Miami, Florida 33101

Re: Florida Power and Light Company
Willow Creek Site of Manatee County Station

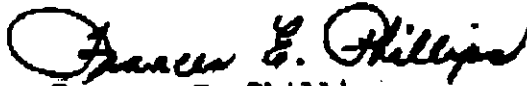
Dear Mr. Barrow:

This is in response to your letter dated January 20, 1976, requesting a determination as to whether Florida Power and Light's Manatee County Station qualifies as an "existing source" under Title 40 of the Code of Federal Regulations (CFR), Part 60, Subpart D.

The information you submitted on January 21, 1976, and the information attached to your letter of January 20, 1976, evidence binding contracts for the purchase of equipment (Boiler Unit #1 and Boiler Unit #2) prior to the effective date of EPA's Regulations on Standards of Performance for New Stationary Sources. Based on this information, it is our opinion that the Manatee County Station is not a "new source" within the meaning of glll (a) (2) of the Clean Air Act Amendments of 1970, and is therefore exempt from the federal requirements imposed under 40 CFR 60.

This exemption is limited to the above described and in no way relieves Florida Power and Light from compliance with other federal, state or local pollution abatement requirements.

Sincerely,


Frances E. Phillips
Regional Counsel

cc: Mr. Jay Landers
Dr. J. P. Subramani

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City of Tallahassee
Arvah B. Hopkins Generating Station
Facility ID No.: 0730003
Leon County

Initial Title V Air Operation Permit
FINAL Permit No.: 0730003-001-AV

Includes Administrative Permit Corrections made on January 2, 1998
(Permit/Project Number: 0730003-002-AV)

Permitting Authority

State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-1344
Fax: 850/922-6979

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Subsection B. This section addresses the following emissions unit(s).

E.U. ID

<u>No.</u>	<u>Brief Description</u>
-004	Boiler Number 2, (Phase II Acid Rain Unit)

Emissions unit number 004 is a Babcock & Wilcox steam generator (model number RB-533) designated as "Boiler Number 2". It is rated at a maximum heat input of 2,325 million Btu per hour (MMBtu/hour) when firing fuel oil and 2,500 MMBtu/hour when firing natural gas and a nominal 238 MW and 1,619,000 pounds of steam per hour.

{Permitting notes: This emissions unit is regulated under Acid Rain, Phase II and the Florida Electrical Power Plant Siting Act (permit number PA 74-03D). This emissions unit pre-dates PSD regulations, but is regulated under Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input. Stack height = 250 feet, exit diameter = 14.0 feet, exit temperature = 220 - 305°F, actual volumetric flow rate = 636,706 acfm. Emissions from this boiler are uncontrolled. This unit began commercial operation in October of 1977.}

The following conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum operation heat input rate is as follows:

<u>Unit No.</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
-004	2,500	Natural Gas
	2,325	No. 2 - No. 6 Fuel Oil; On-Specification Used Oil

Note: When a blend of fuel oil and natural gas is fired, the allowable heat input is prorated based on the percent heat input of each fuel.

[Rules 62-4.160(2), 62-210.200(PTE) & 62-296.405, F.A.C.; and, Applicant request dated June 18, 1997.]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition B.25.

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

B.3. Methods of Operation - Fuels. The fuels that are allowed to be burned in this boiler are natural gas and/or new No. 2 thru No. 6 fuel oil and/or on-specification used oil. (See Specific Condition B.37.)

[Rule 62-213.410, F.A.C.; and, Applicant's request in initial Title V permit application dated June 14, 1996.]

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B.4. Hours of Operation. This emissions unit may operate continuously, i.e. 8760 hours/year. The permittee shall maintain an operation log available for Department inspection that documents the total hours of annual operation, including a detailed account of the hours operated on each of the allowable fuels.

[Rule 62-210.200(PTE), F.A.C.; and, applicant request in initial Title V application received June 14, 1996.]

Emission Limitations and Standards

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

B.5. Visible Emissions. Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.

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

B.6. Visible Emissions. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

[Rule 62-210.700(3), F.A.C.]

B.7. Particulate Matter. Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.

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

B.8. Particulate Matter. Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

[Rule 62-210.700(3), F.A.C.]

B.9. Sulfur Dioxide. Sulfur dioxide emissions when burning liquid fuel shall not exceed 1.87 pounds per million Btu heat input, as measured by applicable compliance methods.

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

B.10. Sulfur Dioxide. For compliance purposes, the following limit supersedes the limit contained in **Specific Condition B.9.** Sulfur dioxide emissions shall not exceed 1.4 pounds per million Btu heat input, as measured by applicable compliance methods. Any calculations used to demonstrate compliance shall be based solely on the heating value, quantities, and the percent sulfur of the liquid and gaseous fuels being burned. (See specific conditions **B.11. & B.23.**)

[Rule 62-204.220 & .240, F.A.C.; AO37-242825 specific condition 4 and Applicant's request in initial Title V permit application received June 14, 1996.]

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B.11. Fuel Sulfur. Fuel sulfur content (percent, by weight) shall be determined by a fuel analysis representative of all "as-fired" fuels. Prior to burning any fuels in the boiler pursuant to this permit, receipts of the analyses of the existing fuels shall have been received by the City in order to use their values and calculate a maximum allowable fuel blend of natural gas and fuel oil. Upon subsequent fuel deliveries, if the vendor's delivery receipts indicate that the sulfur content of the delivered fuel is greater than the sulfur content established by the previous analysis, then a new maximum allowable fuel blend shall be calculated using the assumption that any future fuel fired contains the higher sulfur content. The resulting maximum allowable fuel blend shall be adhered to until such time that a more accurate analysis has been provided. If the vendor's delivery receipt indicates that the sulfur content of the delivered fuel is less than the sulfur content previously established, a new analysis is only necessary if the permittee wishes to adjust the previously established maximum allowable fuel blend. (See specific conditions **B.10.** and **B.23.**)
[Rules 62-4.070(3) & 62-296.405(1)(c)3., F.A.C.; and, Applicant Request dated June 18, 1997.]

B.12. Nitrogen Oxide. Nitrogen oxide emissions shall not exceed 0.3 pounds per million Btu heat input, as measured by applicable compliance methods.
[Rule 62-296.405(1)(d)3., F.A.C.]

Excess Emissions

B.13. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

B.14. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.
[Rule 62-210.700(2), F.A.C.]

B.15. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Monitoring of Operations

{Permitting Note: In accordance with the Acid Rain Phase II requirements, the following continuous monitors are installed on this unit: Gas Fuel Flow, Oil Fuel Flow, NO_x and CO₂.}
[Rules 62-296.405(1)(f)1.c. & d., 62-214.320 and 62-214.330, F.A.C.; 40 CFR Part 75 Appendix D; Section 2.1]}

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B.16. Sulfur Dioxide. The permittee elected to demonstrate compliance using fuel sampling and analysis. This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. See specific conditions B.11. and B.23. of this permit.

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

B.17. Nitrogen Oxides. For emission units that are subject to continuous monitoring requirements under 42 U.S.C. sections 7661-7661f or 40 CFR Part 75, compliance with nitrogen oxides emission limits shall be demonstrated based on a 30-day rolling average, except as specifically provided by 40 CFR Parts 60 or 76.

[Rule 62-296.405(1)(e)4., F.A.C.]

B.18. Determination of Process Variables.

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

Test Methods and Procedures

{Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.19. Visible emissions. The test method for visible emissions shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition B.20.

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

B.20. DEP Method 9. The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent

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Jacksonville Electric Authority
Northside Generating Station/St. Johns River Power Park
Facility ID No.: 0310045
Duval County

Title V Air Operation Permit Revision
FINAL Permit No.: 0310045-002-AV

Permitting Authority:
State of Florida
Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
Title V Section

Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone: 850/488-1344
Fax: 850/922-6979

Compliance Authority:
City of Jacksonville
Regulatory and Environmental Services Department
Air and Water Quality Division
421 West Church Street, Suite 422
Jacksonville, Florida 32202-4111
Telephone: 904/630-3484
Fax: 904/630-3638

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Section III. Emissions Units.

Subsection A. This section addresses the following emissions units.

E.U. ID

<u>No.</u>	<u>Brief Description</u>
-001	NGS Boiler No. 1
-002	NGS Boiler No. 2
-003	NGS Boiler No. 3

NGS Boiler No. 1 is a fossil fuel-fired steam generator with a nominal nameplate rating of 297.5 megawatts (electric). The emissions unit will be allowed to fire new No. 6 residual fuel oil, natural gas, LP gas, "on-specification" used oil, landfill gas, and a blend of fuel oil and natural gas and/or landfill gas. The maximum heat inputs are (1) 2767 MMBtu per hour when firing fuel oil; (2) 2892 MMBtu per hour when firing natural gas or natural/landfill gases; or (3) 2767 - 2892 MMBtu per hour when firing a combination of fuel oil and natural gas or natural/landfill gases, respectively. LP gas is used as the igniter fuel when natural gas is not available. Fuel additives, typically of a magnesium oxide, hydroxide or sulfonate, or calcium nitrate origin, are used to enhance combustion and/or control acidity. Pollutant emissions from this emissions unit are uncontrolled. The combustion gases exhaust through a single stack of 250 feet. NGS Boiler No. 1 began commercial operation in 1966.

NGS Boiler No. 2 is a fossil fuel-fired steam generator with a nominal nameplate rating of 297.5 megawatts (electric). The emissions unit is permitted to fire new No. 6 residual fuel oil, natural gas, and a blend of fuel oil and natural gas. The maximum heat inputs are (1) 2341 MMBtu per hour when firing fuel oil; (2) 2352 MMBtu per hour when firing natural gas; or (3) 2341 - 2352 MMBtu per hour when firing a combination of No. 6 fuel oil and natural gas, respectively. Fuel additives, typically of a magnesium oxide, hydroxide or sulfonate, or calcium nitrate origin, are used to enhance combustion and/or control acidity. Pollutant emissions from this emissions unit are uncontrolled. The combustion gases exhaust through a single stack of 300 feet. NGS Boiler No. 2 began commercial operation in November 1966. NGS Boiler No. 2 was placed on long-term reserve shutdown on March 1, 1984.

NGS Boiler No. 3 is a fossil fuel-fired steam generator with a nominal nameplate rating of 563.7 megawatts (electric). The emissions unit will be allowed to fire new No. 6 residual fuel oil, natural gas, LP gas, "on-specification" used oil, landfill gas, and a blend of fuel oil and natural gas and/or landfill gas. The maximum heat inputs are (1) 5033 MMBtu per hour when firing fuel oil; (2) 5260 MMBtu per hour when firing natural gas or natural/landfill gases; or (3) 5033 - 5260 MMBtu per hour when firing a combination of fuel oil and natural gas or natural/landfill gases, respectively. LP gas is used as the igniter fuel when natural gas is not available. Fuel additives, typically of a magnesium oxide, hydroxide or sulfonate, or calcium nitrate origin, are used to enhance combustion and/or control acidity. Pollutant emissions from this emissions unit are uncontrolled. The combustion gases exhaust through two stacks of 300 feet. NGS Boiler No. 3 began commercial operation in 1977.

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{Permitting note(s): These emissions units are regulated under Acid Rain, Phase II; Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input; and, Rule 62-296.702, F.A.C., Fossil Fuel Steam Generators.}

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

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum operation heat input rates are as follows:

<u>Emissions Unit</u>	<u>MMBtu/hr Heat Input</u>	<u>Fuel Type</u>
NGS Boiler No. 1	2892	Natural Gas
	2892	Landfill Gas
	2767	New No. 6 Fuel Oil
	2767	"On-specification" Used Oil
	2767-2892	Fuel Oil and Natural Gas
	2767-2892	Fuel Oil and Natural/Landfill Gases
NGS Boiler No. 2	2352	Natural Gas
	2341	New No. 6 Fuel Oil
	2341-2352	New No. 6 Fuel Oil and Natural Gas
NGS Boiler No. 3	5260	Natural Gas
	5260	Landfill Gas
	5033	New No. 6 Fuel Oil
	5033	"On-specification" Used Oil
	5033-5260	Fuel Oil and Natural Gas
	5033-5260	Fuel Oil and Natural/Landfill Gases

Note: When a blend of fuel oil and natural and/or landfill gas is fired, the heat input is prorated based on the percent heat input of each fuel.

{Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability.}

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.; and, AO16-194743, AO16-178094 and AO16-207528]

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific conditions A.26. and A.27. [Rule 62-297.310(2), F.A.C.]

A.3. Methods of Operation - Fuels.

a. The only fuels allowed to be burned are natural gas, LP gas, landfill gas, new No. 6 fuel oil, "on-specification" used oil, and a blend of fuel oil and natural gas and/or landfill gas. "On-specification" used oil containing any quantifiable levels of PCBs can only be fired when the emissions unit is at normal operating temperatures. LP gas is used as the igniter fuel when natural gas is not available.

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b. The total station (NGS Boilers Nos. 1, 2 and 3, and NGS Auxiliary Boiler No. 1) residual fuel oil consumption must not exceed 1,440,000 pounds in any consecutive three (3) hour period.
[Rule 62-213.410, F.A.C.; 40 CFR 271.20(e)(3); AO16-194743, AO16-178094 and AO16-207528; AC16-85951 and BACT; and, applicant request dated June 14, 1996.]

A.4. Hours of Operation. The emissions units may operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.; and, AO16-194743, AO16-178094 and AO16-207528]

Emission Limitations and Standards

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

A.5. Visible Emissions. For Boilers Nos. 1 and 3, visible emissions shall not exceed 40 percent opacity. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.
[Rules 62-296.405(1)(a) and 62-296.702(2)(b), F.A.C.; Part X, Rule 2.1001, JEPB; and, AO16-194743 and AO16-207528]

A.6. Visible Emissions. For Boiler No. 2, visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour which opacity shall not exceed 40 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.
[Rules 62-296.405(1)(a) and 62-296.702(2)(b), F.A.C.; Part X, Rule 2.1001, JEPB; and, AO16-178094]

A.7. Visible Emissions - Soot Blowing and Load Change. Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

[Rule 62-210.700(3), F.A.C.; and, Part III, Rule 2.301, JEPB]

A.8. Particulate Matter. Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods. See specific condition A.22.
[Rules 62-296.405(1)(b) and 62-296.702(2)(a), F.A.C.; and, Part X, Rule 2.1001, JEPB]

A.9. Particulate Matter - Soot Blowing and Load Change. Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.
[Rule 62-210.700(3), F.A.C.; and, Part III, Rule 2.301, JEPB]

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A.10. Sulfur Dioxide. SO₂ emissions shall not exceed 1.98 pounds per million Btu heat input, as measured by applicable compliance methods. Any calculations or methods used to demonstrate compliance shall be based on the total heat input from all fossil fuels, including natural gas, and the sulfur from all fuels fired. See specific conditions A.17., A.23. and A.24. [Rules 62-213.440 and 62-296.405(1)(c)1.a., F.A.C.; and, Part X, Rule 2.1001, JEPB]

A.11. Sulfur Dioxide - Sulfur Content. For Boilers Nos. 1 and 3, the sulfur content of the as-fired No. 6 fuel oil shall not exceed 1.8 percent, by weight, if the SO₂ continuous emissions monitor system is temporarily inoperative. For Boiler No. 2, the maximum sulfur content shall not exceed 1.8%, by weight. See specific conditions A.17. and A.24. [Rule 62-296.405(1)(e)3., F.A.C.; Part X, Rule 2.1001, JEPB; and, AO16-178094 and AO16-207528]

A.12. Nitrogen Oxides (expressed as NO₂). For Boiler No. 3, nitrogen oxides shall not exceed 0.30 lb/MMBtu heat input, as measured by applicable compliance methods. See specific condition A.18. [Rule 62-296.405(1)(d)1., F.A.C.; Part X, Rule 2.1001, JEPB; and, AO16-207528]

A.13. "On-Specification" Used Oil. The burning of "on-specification" used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:

a. Only "on-specification" used oil generated by the Jacksonville Electric Authority in the production and distribution of electricity shall be fired in these emissions units. The total combined quantity allowed to be fired in these emissions units shall not exceed 1,000,000 gallons per calendar year. "On-specification" used oil is defined as each used oil delivery that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered "off-specification" oil and shall not be fired. See specific conditions A.34., A.38. and A.39.

<u>CONSTITUENT / PROPERTY*</u>	<u>ALLOWABLE LEVEL</u>
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	100 °F minimum
PCBs	less than 50 ppm

* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).
[40 CFR 279.11]

Excess Emissions

A.14. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.; and, Part III, Rule 2.301, JEPB]

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A.15. Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

[Rule 62-210.700(2), F.A.C.; and, Part III, Rule 2.301, JEPB]

A.16. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.

[Rule 62-210.700(4), F.A.C.; and, Part III, Rule 2.301, JEPB]

Monitoring of Operations

A.17. Sulfur Dioxide.

a. For Boilers Nos. 1 and 3, the permittee elected to monitor emissions using a SO₂ continuous emissions monitoring system (CEMS). This procedure is allowed because the emissions units do not have an operating flue gas desulfurization device. See specific conditions A.10., A.11., A.23. and A.24.

b. Boiler No. 2 has been on long-term reserve shutdown since March 1, 1984.

c. The CEMS shall be calibrated, operated and maintained in accordance with the quality assurance requirements of 40 CFR 75, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and demonstrated based on a 24-hour daily average. A Relative Accuracy Testing Audit (RATA) shall be performed no less than annually.

d. In the event the CEMS becomes temporarily inoperable or interrupted, the fuels and the maximum fuel oil to natural gas firing ratio that can be used is that which was last used to demonstrate compliance prior to the loss of the CEMS, or the emissions units shall fuel switch and be fired with a fuel oil containing a maximum sulfur content of 1.8%, by weight, or less.

e. In the event of natural gas disruption and the emissions units have to fire 100% fuel oil, the emissions units shall be fired with a fuel oil containing a maximum sulfur content of 1.8%, by weight, or less.

[Rules 62-213.440, 62-204.800, 62-296.405(1)(c)3., and 62-296.405(1)(f)1.b., F.A.C.; and, AO16-194743 and AO16-207528]

A.18. Nitrogen Oxides. For Boiler No. 3, compliance with the nitrogen oxides (expressed as NO₂) limit of 0.30 lb/MMBtu shall be demonstrated by the following:

a. Through the use of a CEMS installed, calibrated, operated and maintained in accordance with the quality assurance requirements of 40 CFR 60, Appendix F, and 40 CFR 75, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and demonstrated based on a 30-day rolling average.

b. The performance specifications, location of the monitor, data requirements, data reduction and reporting requirements shall conform with the requirements of 40 CFR 51, Appendix P, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and 40 CFR 60, Appendix B, adopted by reference in Rule 62-204.800, F.A.C.

[Rules 62-296.405(1)(e)4. and 62-296.405(1)(f), F.A.C.; Part X, Rule 2.1001, JEPB; and, 40 CFR 60 & 75]

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Via Hand Delivery

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
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
Permit Revision to add Natural Gas as a Permitted Fuel

Dear Mr. Fancy:

0810010-007-AC
0810010-008-AV

On May 3, 2002, Florida Power & Light Company filed a request for permit revision with your office, regarding the above-referenced matter. The responsible official certification included with that request was inadvertently submitted without the signature. The properly signed version of the certification is attached, along with four copies.

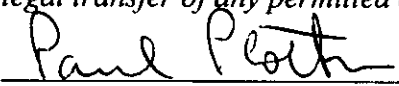
Thank you for your cooperation and assistance in this matter. Please let me know if you have any questions.

Sincerely,

Paul Plotkin
Manatee Plant General Manager

cc: A.A. Linero, P.E., Administrator, New Source Review Section, DEP
Scott M. Sheplak, P.E., Administrator, Title V Section, DEP
Jerry Kissel, Southwest District Office, DEP
Tom Murray, Manatee County Air Quality Management Division

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Paul Plotkin; Manatee Plant General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Power & Light Company, Manatee Plant Street Address: 19050 State Road 62 City: Parrish State: Florida Zip Code: 34219
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (941)- 776-5211 Fax: (941)- 776-5219
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature 5/2/02 Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kathryn S. Salvador, P.E. Registration Number: 54726
2. Professional Engineer Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408
3. Professional Engineer Telephone Numbers: Telephone: (561)- 691- 7054 Fax: (561)- 691-7049

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Paul Plotkin; Manatee Plant General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Power & Light Company, Manatee Plant Street Address: 19050 State Road 62 City: Parrish State: Florida Zip Code: 34219
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (941)- 776-5211 Fax: (941)- 776-5219
4. Owner/Authorized Representative or Responsible Official Statement: <p><i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i></p> <p><u>Paul Plotkin</u> <u>5/2/02</u></p> <p>Signature Date</p>

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kathryn S. Salvador, P.E. Registration Number: 54726
2. Professional Engineer Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408
3. Professional Engineer Telephone Numbers: Telephone: (561)- 691- 7054 Fax: (561)- 691-7049



5/6 Scott - An application
discuss w me on const permit
& let me know. Clair

May 2, 2002

RECEIVED

MAY 03 2002

BUREAU OF AIR REGULATION

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
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
Permit Revision to add Natural Gas as a Permitted Fuel

Dear Mr. Fancy:

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 request 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 Comparison ¹ <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.

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 (annual capacity factors ranging from 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—To provide the Department with information demonstrating that the addition of natural gas does not cause an increase in actual annual emissions, we will submit annual emissions data for a period of five years following the addition of natural gas at Manatee Units 1 and 2 (calendar years 2003-2007), as required under Rule 62-210.200(11)(d), F.A.C.

Title V Permit Amendment—We respectfully request that the Department revise the Manatee Plant's Title V permit to authorize the use of natural gas as a fuel for Units 1 and 2. Because the addition of natural gas does not constitute a "modification" and because the construction permit for Units 1 and 2 was not issued under the New Source Review program, a construction permit or construction permit revision is not required under Rule 62-210.300(1)(b)1., F.A.C. If the Department determines that a construction permit is needed, please process the application as a request to issue a construction permit as well as to revise the Title V permit. An original and four copies of the appropriate

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

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 revision. 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,

A handwritten signature in black ink that reads "Paul Plotkin". The signature is written in a cursive style with a large, stylized "P" and "P".

Paul Plotkin
Manatee Plant General Manager

cc: A. A. Linero, P.E., Administrator New Source Review Section, DEP
Scott M. Sheplak, P.E., Administrator Title V Section, DEP
Jerry Kissel, Southwest District Office, DEP
Tom Murray, Manatee County Air Quality Management Division

Attachments: (2)

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

Fuel Oil Data

- The SO₂, and NO_x, emissions 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.
- The maximum heat input while firing 100% 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 emissions of 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.
- The maximum heat input while firing 100% gas is 5760 MMBtu/hr.

RECEIVED

MAY 03 2002



Department of
Environmental Protection
 Division of Air Resources Management

BUREAU OF AIR REGULATION

Identification of Facility

1. Facility Owner/Company Name: Florida Power & Light Company	
2. Site Name: Manatee Plant	
3. Facility Identification Number: 08 100 10 [] Unknown	
4. Facility Location: Street Address or Other Locator: 19050 State Road 62 City: Parrish County: Manatee Zip Code: 34219	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Contact

Name and Title of Application Contact: Kevin Washington, Senior Environmental Specialist	
2. Application Contact Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408	
3. Application Contact Telephone Numbers: Telephone: (561)-691-2877 Fax: (561)-691-7049	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- ☒ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: 08 100 10-001-AV

Reason for revision: The addition of natural gas as a boiler fuel to Units 1&2

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- ☐ Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Paul Plotkin; Manatee Plant General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Florida Power & Light Company, Manatee Plant Street Address: 19050 State Road 62 City: Parrish State: Florida Zip Code: 34219
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (941)- 776-5211 Fax: (941)- 776-5219
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> _____ Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kathryn S. Salvador, P.E. Registration Number: 54726
2. Professional Engineer Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408
3. Professional Engineer Telephone Numbers: Telephone: (561)- 691- 7054 Fax: (561)- 691-7049

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

*If the purpose of this application is to **revise the existing** Title V source air operation permit (check here [☒], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [☐], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [☐], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Kathleen S. Salvaan
Signature

4/29/2002
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Fossil Fuel Steam Generator, Unit 1	Title V	N/A
002	Fossil Fuel Steam Generator, Unit 2	Title V	N/A

Application Processing Fee

Check one: ☐ Attached - Amount: \$ _____ ☒ Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The addition of natural gas as a permitted fuel to existing Units 1&2. The emissions units are currently permitted to burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations. The addition of natural gas as a permitted fuel will not cause an increase in emissions.

We believe that no Construction Permit revision is needed.

2. Projected or Actual Date of Commencement of Construction:

3. Projected Date of Completion of Construction:

Application Comment:

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/ <u>Fuel</u> Type) (limit to 500 characters): Natural gas: Pipeline quality natural gas		
2. Source Classification Code (SCC):		3. SCC Units: Dry Standard Cubic Foot (DSCF)
4. Maximum Hourly Rate: 5670 MMBtu/hour	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0000006 Lb./ DSCF	8. Maximum % Ash: 0.0000019 Lb./DSCF	9. Million Btu per SCC Unit: 1.04 ⁻³
10. Segment Comment (limit to 200 characters): The maximum heat input rate while firing 100% natural gas is 5670 MMBtu/hour. This is reduced from 8650 MMBtu/hour when firing 100% fuel oil due to thermal limitations of certain boiler components. When natural gas and fuel oil are co-fired, the maximum hourly heat input rate is prorated accordingly.		

Segment Description and Rate: Segment of

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



May 2, 2002

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
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
Permit Revision to add Natural Gas as a Permitted Fuel

Dear Mr. Fancy:

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 request that the Title V permit be revised accordingly.

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Manatee Units 1 and 2 Short-Term Emission Rate Comparison ¹ Pounds Per Hour Pounds Per Million Btu		
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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.

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 (annual capacity factors ranging from 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.

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Title V Permit Amendment—We respectfully request that the Department revise the Manatee Plant's Title V permit to authorize the use of natural gas as a fuel for Units 1 and 2. Because the addition of natural gas does not constitute a "modification" and because the construction permit for Units 1 and 2 was not issued under the New Source Review program, a construction permit or construction permit revision is not required under Rule 62-210.300(1)(b)1., F.A.C. If the Department determines that a construction permit is needed, please process the application as a request to issue a construction permit as well as to revise the Title V permit. An original and four copies of the appropriate

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

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 revision. 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,

A handwritten signature in black ink that reads "Paul Plotkin". The signature is written in a cursive, flowing style.

Paul Plotkin
Manatee Plant General Manager

cc: A. A. Linero, P.E., Administrator New Source Review Section, DEP
Scott M. Sheplak, P.E., Administrator Title V Section, DEP
Jerry Kissel, Southwest District Office, DEP
Tom Murray, Manatee County Air Quality Management Division

Attachments: (2)

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

Fuel Oil Data

- The SO₂, and NO_x, emissions 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
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- The maximum heat input while firing 100% gas is 5760 MMBtu/hr.



Department of
Environmental Protection
 Division of Air Resources Management

Identification of Facility

1. Facility Owner/Company Name: Florida Power & Light Company	
2. Site Name: Manatee Plant	
3. Facility Identification Number: 08 100 10 [] Unknown	
4. Facility Location: Street Address or Other Locator: 19050 State Road 62 City: Parrish County: Manatee Zip Code: 34219	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Contact

Name and Title of Application Contact: Kevin Washington, Senior Environmental Specialist	
2. Application Contact Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408	
3. Application Contact Telephone Numbers: Telephone: (561)- 691-2877 Fax: (561)- 691-7049	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- ☒ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: 08 100 10-001-AV

Reason for revision: The addition of natural gas as a boiler fuel to Units 1&2

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
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4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> _____ Signature Date

* Attach letter of authorization if not currently on file.

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1. Professional Engineer Name: Kathryn S. Salvador, P.E. Registration Number: 54726
2. Professional Engineer Mailing Address: Organization/Firm: Florida Power & Light Company, Environmental Services Street Address: P.O. Box 14000 City: Juno Beach State: Florida Zip Code: 33408
3. Professional Engineer Telephone Numbers: Telephone: (561)- 691- 7054 Fax: (561)- 691-7049

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to revise the existing Title V source air operation permit (check here [X], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Kathleen S Salvaan
Signature

4/29/2002
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Fossil Fuel Steam Generator, Unit 1	Title V	N/A
002	Fossil Fuel Steam Generator, Unit 2	Title V	N/A

Application Processing Fee

Check one: ☐ Attached - Amount: \$ _____ ☒ Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The addition of natural gas as a permitted fuel to existing Units 1&2. The emissions units are currently permitted to burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations. The addition of natural gas as a permitted fuel will not cause an increase in emissions.

We believe that no Construction Permit revision is needed.

2. Projected or Actual Date of Commencement of Construction:

3. Projected Date of Completion of Construction:

Application Comment:

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/ <u>Fuel</u> Type) (limit to 500 characters): Natural gas: Pipeline quality natural gas			
2. Source Classification Code (SCC):		3. SCC Units: Dry Standard Cubic Foot (DSCF)	
4. Maximum Hourly Rate: 5670 MMBtu/hour	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 0.0000006 Lb./ DSCF	8. Maximum % Ash: 0.0000019 Lb./DSCF	9. Million Btu per SCC Unit: 1.04 ⁻³	
10. Segment Comment (limit to 200 characters): The maximum heat input rate while firing 100% natural gas is 5670 MMBtu/hour. This is reduced from 8650 MMBtu/hour when firing 100% fuel oil due to thermal limitations of certain boiler components. When natural gas and fuel oil are co-fired, the maximum hourly heat input rate is prorated accordingly.			

Segment Description and Rate: Segment of

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



Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

June 26, 2002

RECEIVED

JUN 27 2002

Re: Manatee Plant -- Title V Permit No. 0810010-001-AV
Permit Revision to Add Natural Gas as a Permitted Fuel

BUREAU OF AIR REGULATION

"Dear Mr. Fancy:

I am writing in regards to our pending request to add natural gas as a permitted fuel for Manatee Units 1 and 2, as a follow up to my letter dated May 2, 2002. We hope the Department's review of our request will benefit from clarification on several points, as provided below.

The applicable nitrogen oxides (NOx) emission limiting standard for Manatee Units 1 and 2 under the Department's rules is 0.30 pounds per million Btu heat input. See FAC Rule 62-296.405(1)(d)2. The NOx emissions limit is also specified in the Manatee Plant's Title V air permit, at Condition III.A.10. FPL understands this to be the applicable limit if natural gas is burned in Manatee Units 1 or 2, as the language of FAC Rule 62-296.405(1)(d)2. is not fuel-specific. This conclusion is entirely consistent with the Department's historical practice and regulatory treatment for other dual-fuel generating units under FAC Rule 62-296.405(1)d. We neither sought nor anticipated any change in the applicable NOx emission limit for Manatee Units 1 and 2 by virtue of the addition of natural gas as a permitted fuel.

FPL's request for permit revision did include a comparison showing both actual Manatee Unit 1 and 2 emission rates resulting from firing of fuel oil, and expected short-term emission rates for natural gas. The NOx emission rate indicated in that comparison for gas was, as noted, "based upon the burner manufacturer's predicted performance." To provide the Department with a full understanding on this point, I have reviewed the circumstances involving FPL's contract for new Low-NOx Burners (LNB) that were ultimately installed at Manatee Units 1 and 2 in 2000.

After evaluation of bids submitted in response to an RFP, FPL chose Alstom Power (formerly International Combustion Limited) as the manufacturer/vendor for the Manatee Low-NOx Burners. FPL's contract with Alstom included a guaranteed NOx emission rate of 0.30 pounds per million Btu and liquidated damages if NOx emissions exceed this rate when fuel oil is fired. Although the new burners were designed to be capable of firing natural gas, and performance levels were requested by FPL, no liquidated damages were established for emission rates or boiler performance when firing natural gas. No guarantee was obtained from Alstom for the maximum NOx emission rate firing gas for three main reasons. First, the Manatee Units had never burned natural gas and, accordingly, there were no data on NOx emissions or operational baselines upon which to establish a guaranteed NOx emission rate for gas. Second, given the

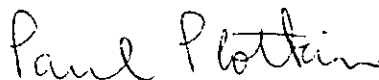
uncertainty as to whether gas would be fired in the Manatee Units, no test rig evaluation for natural gas was performed on the new burners, and thus, no emissions data were obtained with this fuel. Third, since the Manatee Units were not then served by a natural gas supply, and there were then no immediate or definite plans to add natural gas at the Manatee Plant, it would have been impossible to determine the NOx emission rate on gas as part of the warranty performance testing conducted following installation of the burners and prior to their final acceptance by FPL.

There is no application of these custom-designed Low-NOx Burners on any boiler similar to the Manatee Units. The NOx emission rate for natural gas at FPL's Martin Units 1 and 2 can be used only as a rough indicator of what we can expect when the boilers and burners of Manatee Units 1 and 2 burn gas. Nonetheless, all information available to FPL indicates that the NOx emission rate firing natural gas in Manatee Units 1 and 2 will be less than the rate for oil firing, and thus less than the applicable limit of 0.30 pounds per million Btu heat input. Alstom Power's predicted burner performance firing natural gas, which is the basis for the NOx emission rate indicated in my letter of May 2, 2002, is thus a reasonable estimate consistent with FPL's extensive experience with Low-NOx Burners on oil/gas-fired generating units. The predicted performance of the burners is also consistent with the desired objectives of the Manatee burner replacement program and design.

In summary, there is reasonable assurance that Manatee Units 1 and 2 will comply with the NOx emission limit applicable under Department rule when firing natural gas. We cannot be absolutely certain as to exactly how much lower the NOx emissions rate will be when firing gas compared to current operation firing fuel oil. We can be certain, however, that emission rates for other air pollutants, such as sulfur dioxide and particulate matter, will be several orders of magnitude lower with gas compared to oil. These clear and substantial improvements in environmental performance are available only if the Manatee Units burn gas.

Your continued consideration on this matter is appreciated. Please do not hesitate to contact me at (941) 776-5211 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Paul Plotkin".

Paul Plotkin
Manatee Plant General Manager

cc: A.A. Linero, P.E., Administrator New Source Review Section, DEP
Scott M. Sheplak, P.E., Administrator Title V Section, DEP
Jeffery F. Koerner, Permit Engineer New Source Review Section, DEP
Jerry Kissel, Southwest District Office, DEP
Tom Murray, Manatee County Air Quality Management Division