

Department of Environmental Protection

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

David B. Struhs Secretary

July 9, 2002

Mr. Paul Plotkin, Plant General Manager Florida Power and Light 19050 State Road 62 Parrish, FL 34219

Re: FPL Manatee Power Plant
Draft Air Construction Project No. 0810010-007-AC
Construction of Natural Gas Infrastructure
Draft Title V Air Operation Permit Revision No. 0810010-008-AV
Concurrent Revision to Add Natural Gas as an Authorized Fuel

Dear Mr. Plotkin:

One copy of the Technical Evaluation and Preliminary Determination, the Statement of Basis, the combined Public Notice, the Draft Air Construction Permit, and the Draft Title V Air Operation Permit Revision for the FPL Manatee Power Plant is enclosed. The Department's "Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision" and the "Public Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision" are also included.

An electronic version of the Draft Title V Air Operation Permit Revision has been posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review. The web site address is:

"http://www.dep.state.fl.us/air/permitting/tv/TitleVSearch.asp"

The "Public Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision" must be published as soon as possible. Proof of publication, i.e., newspaper affidavit, must be provided to the permitting authority's office within seven (7) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits pursuant to Rule 62-110.106(11), F.A.C.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to Jeff Koerner, at the above letterhead address. If you have any other questions, please contact Mr. Koerner, at 850/921-9536.

Sincerely,

C. H. Fancy, P.E., Chief Bureau of Air Regulation

CHF/AAL/SMS/jfk

Enclosures

U.S. EPA, Region 4 (INTERNET E-mail)

In the Matter of an Application for Permits by:

Florida Power and Light 19050 State Road 62 Parrish, FL 34219

Authorized Representative and Responsible Official:
Mr. Paul Plotkin, Plant General Manager

Draft Construction Permit No. 0810010-007-AC Draft Title V Permit No. 0810010-008-AV FPL Manatee Power Plant Manatee County, Florida

INTENT TO ISSUE AIR CONSTRUCTION PERMIT AND TITLE V AIR OPERATION PERMIT REVISION

Florida Power and Light (applicant) applied on May 10, 2002 for an Air Construction Permit and concurrent Title V Air Operation Permit Revision for the Manatee Power Plant located at 19050 State Road 62 in Parrish, Manatee County, Florida. The Florida Department of Environmental Protection (permitting authority) gives notice of its intent to issue Air Construction Permit and Title V Air Operation Permit Revision for the Title V source detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below. Copies of the Draft Air Construction Permit and Draft Title V Air Operation Permit Revision are attached.

Florida Power and Light (FPL) proposes to construct the necessary infrastructure to supply natural gas to existing electric utility steam generating Units 1 and 2. These units include low NOx burners, which incorporate air and fuel staging to reduce emissions of nitrogen oxides when firing either fuel oil or natural gas. FPL predicts that the project will not result in net actual emissions increases and therefore does not require review under the Prevention of Significant Deterioration (PSD) of Air Quality program. This procedure is available to operators of electric utility steam generating units in accordance with the Department's rules. The draft permits authorize the construction of the infrastructure to supply natural gas to existing Units 1 and 2, the use of natural gas as an allowable fuel, and specify emissions standards consistent with the Department's regulations.

The permitting authority has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-212 and 62-213. This source is not exempt from construction and Title V permitting procedures. The permitting authority has determined that an Air Construction Permit and a Title V Air Operation Permit Revision are required to modify and commence or continue operations at the facility.

The permitting authority intends to issue the Air Construction Permit and the Title V Air Operation Permit Revision based on the belief that reasonable assurances have been provided to indicate that the construction activity and operation of the source will not adversely impact air quality, and the source will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.087, F.S., and Rules 62-110.106 and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit and Title V Air Operation Permit Revision" ("Public Notice"). The notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the permitting authority at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400, within 7 (seven) days of publication pursuant to Rule 62-110.106(5), F.A.C. Failure to publish the notice and provide proof of publication may result in the denial of the permits pursuant to Rule 62-110.106(11), F.A.C.

The permitting authority will issue the Air Construction Permit and the PROPOSED Title V Air Operation Permit Revision and subsequent FINAL Title V Air Operation Permit Revision, in accordance with the conditions of the attached Draft Air Construction Permit and the DRAFT Title V Air Operation Permit Revision unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will accept written comments concerning the proposed Air Construction Permit issuance action for a period of 14 (fourteen) days from the date of publication of the "Public Notice". The permitting authority will accept written comments concerning the proposed Title V Air Operation Permit Revision issuance action for a period of 30 (thirty) days from the date of publication of the "Public Notice". Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed

Draft Air Construction Permit No. 0810010-007-AC
Draft Title V Air Operation Permit Revision No. 0810010-008-AV
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shall be made available for public inspection. If written comments received result in significant changes, the permitting authority shall issue revised draft permits and require, if applicable, another "Public Notice".

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 (fourteen) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 (fourteen) days of publication of the public notice or within 14 (fourteen) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within 14 (fourteen) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

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

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

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

Mediation will not be available in this proceeding.

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

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

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner. Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not

Draft Air Construction Permit No. 0810010-007-AC
Draft Title V Air Operation Permit Revision No. 0810010-008-AV
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authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the United States Environmental Protection Agency and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Finally, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit revision. Any petition shall be based only on objections to the permit revision that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Executed in Tallahassee, Florida.

C. H. Fancy, P.E., Chief Bureau of Air Regulation

CERTIFICATE OF SERVICE

Mr. Paul Plotkin, FPL*

Chair, Manatee County Commissioners*

President, Manatee County Citizens Against Pollution (MCAP)*

Mr. Clarence Troxell*

Mr. Kevin Washington, FPL

Ms. Kathryn S. Salvador, FPL

Air Quality Manager, Manatee County Environmental Management Department

Mr. Gerald Kissel, SWD

Mr. Hamilton Oven, DEP Siting Office

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency Clerk, receipt of which is hereby acknowledged.

Victoria Gelson July 9, 2002

Best Available Copy

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT AND TITLE V AIR OPERATION PERMIT REVISION

Florida Department of Environmental Protection

Florida Power and Light - Manatee Power Plant Manatee County, Florida

Draft Air Construction Permit No. 0810010-007-AC
Construction of Natural Gas Infrastructure

Draft Title V Air Operation Permit Revision No. 0810010-008-AV Concurrent Revision to Add Natural Gas as an Authorized Fuel

The Florida Department of Environmental Protection (permitting authority) gives notice of its intent to issue an Air Construction Permit and a Title V Air Operation Permit Revision to Florida Power and Light (applicant) for the Manatee Power Plant located at 19050 State Road 62 in Parrish, Manatee County, Florida. The applicant's authorized representative and responsible official is Mr. Paul Plotkin, Plant General Manager. The applicant's address is Florida Power and Light, Manatee Power Plant, 19050 State Road 62, Parrish, FL 34219.

The new Gulfstream Natural Gas Pipeline began commercial operation in June of 2002. The project brings natural gas that is compressed near Mobile Alabama and conveyed through an underwater pipeline on the continental shelf to markets in Florida. The new pipeline instantly increases the total natural gas transportation capacity into Florida from approximately 1.5 to 2.5 billion standard cubic feet, excluding other proposed pipeline projects. The pipeline enters Florida in Manatee County at a location that is particularly convenient to the FPL Manatee Plant.

Florida Power and Light (FPL) proposes to take advantage of the new pipeline by constructing the necessary infrastructure to supply natural gas to existing electric utility steam generating Units 1 and 2. These existing units include low NOx burners, which incorporate air and fuel staging to reduce emissions of nitrogen oxides when firing either fuel oil or natural gas. FPL predicts that the project will not result in net actual annual emissions increases above the past actual annual emissions from the units (averaged for 2000 to 2001). Therefore, FPL maintains that the project does not require review under the Prevention of Significant Deterioration (PSD) of Air Quality program. This procedure is available to operators of electric utility steam generating units in accordance with federal regulations and the Department's rules.

The Department determines that the addition of natural gas is not likely to cause an increase in actual annual emissions from the plant. Natural gas is a clean burning fuel that contains little ash or sulfur. Emissions of carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, and volatile organic compounds are expected to decrease when firing natural gas as compared to firing fuel oil. The draft permits authorize the construction of the infrastructure to supply natural gas to existing Units 1 and 2 and establishes emissions standards for opacity, particulate matter, and nitrogen oxides that are consistent with Rule 62-296.405, F.A.C., which applies to large boilers. The draft permits also establish monitoring and reporting requirements to verify that the gas project was not subject to PSD. The Department notes that FPL is among the highest users of natural gas in the country and strongly encourages FPL to actually fire the newly available natural gas in Manatee Units 1 and 2.

The permitting authority will issue the Air Construction Permit and the PROPOSED Title V Air Operation Permit Revision and subsequent FINAL Title V Air Operation Permit Revision, in accordance with the conditions of the Draft Air Construction Permit and the Draft Title V Air Operation Permit Revision unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The permitting authority will accept written comments concerning the proposed Draft Air Construction Permit issuance action for a period of 14 (fourteen) days from the date of publication of this Public Notice. The permitting authority will accept written comments concerning the proposed Draft Title V Air Operation Permit Revision issuance action for a period of 30 (thirty) days from the date of publication of this Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in significant changes, the permitting authority shall issue revised draft permits and require, if applicable, another "Public Notice".

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 of the Florida Statutes (F.S.). The petition must contain the formation set forth below and must be filed (received) in the Department's Office of General Counsel at 3900 mmonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by any persons other than entitled to written notice under Section 120.60(3), F.S., must be filed within 14 (fourteen) days of publication of the

public notice or within 14 (fourteen) days of receipt of the notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the permitting authority for notice of agency action may file a petition within 14 (fourteen) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the applicable time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code (F.A.C.).

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

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

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

Mediation is not available for this proceeding.

In addition to the above, pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit revision. Any petition shall be based only on objections to the permit revision that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Permitting Authority:
Bureau of Air Regulation
Florida Department of Environmental Protection
111 S. Magnolia Drive, Suite 4
Tallahassee, FL 32301
Telephone: 850/488-0114

Affected District Office
Southwest District Office
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619-8218
Telephone: 813/744-6100

The complete project file includes the Technical Evaluation and Preliminary Determination, the Draft Air Construction Permit, the Draft Title V Air Operation Permit Revision, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact permit engineer at the above address, or call 850/488-0114, for additional information.

TECHNICAL EVALUATION & PRELIMINARY DETERMINATION

PROJECT

Manatee Power Plant Units 1 and 2 ARMS Emissions Unit Nos. 001 and 002

Draft Air Construction Permit No. 0810010-007-AC Construction of Natural Gas Facilities

Draft Title V Operation Permit Revision No. 0810010-008-AV Addition of Natural Gas as an Authorized Fuel

COUNTY

Manatee County

APPLICANT

Florida Power and Light Manatee Power Plant ARMS Facility ID No. 0810010

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section



July 3, 2002

1. APPLICATION INFORMATION

Applicant Name and Address

Florida Power and Light 19050 State Road 62 Parrish, FL 34219

Authorized Representative: Mr. Paul Plotkin, Plant General Manager

Processing Schedule

05/10/02: Received permit application Nos. 0810010-007-AC and 0810010-008-AV; complete.

06/27/02: Letter received from applicant.

Existing Facility Description

Florida Power and Light owns and operates the Manatee Plant, which is a steam-electrical power plant located at 19050 State Road 62 in Parrish (Manatee County), Florida. The UTM coordinates are: Zone 17, 367.25 km East, and 3054.15 km North (Latitude: 27° 36′ 21" and Longitude: 82° 20′ 44"). The plant consists of two oil-fired steam-electrical generating units and miscellaneous support equipment.

Regulatory Categories

<u>Title III</u>: The facility is a major source of hazardous air pollutants (HAP).

<u>Title IV</u>: The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is Title V major source of air pollution.

<u>PSD</u>: The facility is a major source of air pollution with respect to the requirements of the Prevention of Significant Deterioration (PSD) of Air Quality Program, Rule 62-212.400, F.A.C.

2. PROJECT DESCRIPTION

Florida Power and Light (FPL) operates the existing Manatee Power Plant, which is a steam-electrical generating plant located in Manatee County, Florida. The plant primarily consists of two oil-fired steam-electrical generators, each of which are designed to produce a nominal 800 MW of electricity. Unit 1 began commercial operation in 1976 and Unit 2 began commercial operation in 1977. Each unit is currently permitted to fire a variable combination of No. 6 fuel oil, No. 2 fuel oil, propane, and used oil fuel from FPL operations. Units 1 and 2 are considered "electric utility steam generating units" as defined in Rule 62-210.200(97), F.A.C. and with regard to Rule 62-210.200(11), F.A.C.

The new Gulfstream Natural Gas Pipeline began commercial operation in June of 2002. See Figure 1 on the following page. The project brings natural gas that is compressed near Mobile Alabama and conveyed through an underwater pipeline on the continental shelf to markets in Florida. The new pipeline instantly increases the total natural gas transportation capacity into Florida from approximately 1.5 to 2.5 billion standard cubic feet, excluding Florida Gas Transmission Company's Phases V and VI projects. The pipeline enters Florida in Manatee County at a location that is particularly convenient to the FPL Manatee Plant.

As a direct result of the new pipeline, FPL proposes to add natural gas as an authorized fuel for existing Units 1 and 2. (FPL also proposes a mostly gas-fired combined cycle project at the Manatee Plant, which is presently under separate review by the Department.) The existing burners for each unit are CSL Twin Register Low NOx burners manufactured by ABB Combustion Services, Ltd. (formerly International Combustion Limited), which are similar in configuration to the burners used for Units 1 and 2 at the FPL Martin Power Plant. The low-NOx burner design incorporates air and fuel staging to reduce emissions of nitrogen oxides when firing either fuel oil or natural gas. Mechanical atomization is used to reduce droplet size for efficient combustion when firing fuel

oil. Due to temperature limitations of existing boiler components, FPL will physically restrict the maximum heat input rate when firing natural gas to 5670 MMBtu per hour, which is less than the current maximum for oil firing (8650 MMBtu per hour). At this rate, the unit will produce approximately 575 MW. The units will cofire natural gas with fuel oil.

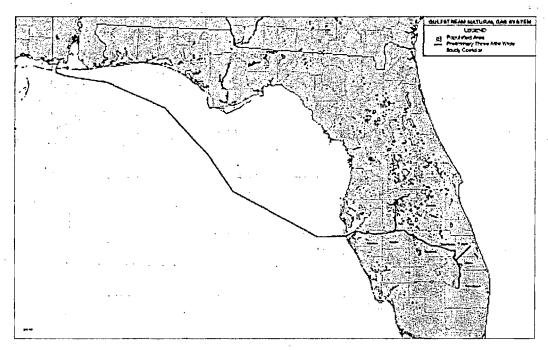


Figure 1. Ultimate Development Scenario for Gulfstream Pipeline

The applicant provided the following supporting information indicating that the short-term emission rates will not increase with the firing of natural gas.

Table 1. Emission Rates in Application

·		Emission Factors			
Pollutant	Fuel Oil ²		Natural Gas b		
	lb/MMBtu	lb/hour	lb/MMBtu	lb/hour	
Carbon Monoxide (CO)	0.63	5450	0.46	2608	
Nitrogen Oxides (NOx)	0.29	2545	0.20	1152	
Particulate Matter (PM)	0.08	719	0.002	10	
Sulfur Dioxide (SO2)	1.06	9183	0.0006	3	
Volatile Organic Compounds (VOC)	0.005	44	0.003	17	

Notes:

- a. Oil Firing: The CO emission factor is based on actual test data. The NOx and SO2 emission factors are from the EPA Acid Rain Scorecard values, which are based on actual CEMS data and heat input rates. The PM and VOC emission factors are based on EPA's AP-42 factors. The current maximum heat input to each unit is 8650 MMBtu per hour when firing only fuel oil.
- b. Gas Firing: The CO and NOx emission factors are based on the burner manufacturer's predicted performance. The PM, SO2, and VOC emission factors are based on EPA's AP-42 factors. Due to thermal

limitations of boiler components, FPL indicates that the maximum heat input rate to each boiler will be 5670 MMBtu per hour when firing only natural gas.

Pursuant to Rule 62-210.200(11)(d), F.A.C., the applicant also predicts that the project will not result in any net annual emissions increases that would require a PSD review in accordance with rule 62-212.400, F.A.C. The applicant does not believe this request requires a construction permit because the project is not a "modification" as specified in Rule 62-210.200(169), F.A.C., which defines a "modification" as a physical change or a change in the method of operation that would result in an increase in actual emissions. Therefore, the applicant requests a revision to the Title V air operation permit to allow the use of natural gas in Units 1 and 2. However, the applicant recognizes that the Department has determined that an air construction permit is required to make the necessary physical changes and instructs the Department to process the application as a construction permit with a concurrent revision to the Title V air operation permit, if necessary.

3. DEPARTMENT REVIEW

Application

The Department determines that an air construction permit is required to perform the necessary work that will enable the units to fire natural gas. Rule 62-210.200(76), F.A.C. defines construction as, "the act of performing on-site fabrication, erection, installation or modification of an emissions unit or facility of a permanent nature, including installation of foundations or building supports; laying of underground pipe work or electrical conduit; and fabrication or installation of permanent storage structures, component parts of an emissions unit or facility, associated support equipment, or utility connections. Land clearing and other site preparation activities are not a part of the construction activities." FPL proposes to erect permanent natural gas pipelines and the associated equipment necessary for firing natural gas in Units 1 and 2. Therefore, the Department will process the request as both a construction permit and a revision to the Title V air operation permit.

Burner History

Manatee Units 1 and 2 were originally equipped with mechanically atomizing burners (Forney Type "QPWRMA") to fire fuel oil. The Department was informed by FPL after the fact that the mechanical-atomizing burners were replaced with steam-atomizing burners in 1994/1995. FPL stated that the purpose of the 1994/1995 change was to provide more efficient combustion of the fuel oil. In 1999, FPL received Department approval to return to mechanically atomizing burners by installing modern low NOx burners manufactured by ABB Combustion Services, Ltd. The new burners were expected to reduce opacity as well as emissions of carbon monoxide and nitrogen oxides. By this project, FPL is requesting authorization to construct natural gas facilities for Units 1 and 2 and to specify its use as an allowable fuel.

Annual Emissions Estimates

As part of the project review, the Department used several methods to estimate past actual annual emissions. Table 2 presents the results.

Table 2. Annual Emissions for Units 1 and 2 (Average for 2000/2001)

Pollutant	Application ^a	AORs b	Acid Rain c
СО	18,822	18,987	
NOx	8664	9237	8179
PM	2390	2384	
SO ₂	31,668	29,924	31,753
VOC	149	.149	

Notes:

- a. Emissions are based on the actual fuel consumption during 2000 and 2001.
- b. The figures represent the average annual emissions for Units 1 and 2 in "tons per year" for operation during calendar years 2000 and 2001. "AOR" means the Annual Operating reports submitted to the Department as certified by FPL.
- c. The NOx and SO2 "Acid Rain" emissions are based on the annual emissions reported to the EPA Acid Rain Program for the calendar years 2000 and 2001.

In addition, FPL operates Units 1 and 2 at the Martin Power Plant, which were constructed in the early 1980's. These units have boiler and burner configurations that are similar to the Manatee units. Based on the 2001 Annual Operating Reports (AOR), the Martin Units 1 and 2 averaged an annual capacity factor of 41% and a fuel mix of 55% fuel oil to 45% natural gas. Table 3 provides a comparison of the Manatee and Martin Units 1 and 2. As shown, the future firing of natural gas is likely to result in fewer emissions than firing fuel oil. The actual emissions for the Martin units suggest that CO, NOx, and SO2 emissions from the Manatee units may be even lower than anticipated when firing natural gas.

Pollutant	FPL Manatee Plant ^a		FPL Martin Plant b
	41% Capacity All Oil/No Gas	41% Capacity 55% Oil/45% Gas	41% Capacity 55% Oil/45% Gas
СО	19,572	17,196	12,904
NOx	9,320	7,922	6010
PM	2,485	1,395	1508
SO ₂	32,931	18,121	17,592
VOC	155	127	140

Table 3. Comparison of Annual Emissions – Manatee and Martin Units 1 and 2

Notes:

- a. A 41% capacity factor for Manatee Units 1 and 2 was assumed to provide a common basis for comparison with the Martin Plant. Similarly, the average annual fuel mix (55% oil/45% gas) reflects that of Martin Units 1 and 2 for 2001. CO and NOx emissions are based on the manufacturer's predicted emissions rates of 0.46 lb/MMBtu and 0.20 lb/MMBtu, respectively.
- b. Based on the 2001 AOR, Martin Units 1 and 2 averaged an annual capacity factor of 41% and an annual fuel mix of 55% fuel oil to 45% natural gas.

The Department also estimated the emissions of hazardous air pollutants from both oil firing and gas firing based on published EPA emission factors. The firing of natural gas or the co-firing of natural gas with fuel oil would result in overall lower emissions of hazardous air pollutant emissions. No further review is required because the applicant does not intend to "construct" or "reconstruct" a major source of for hazardous air pollutants as defined in Subpart B of 40 CFR 63.

PSD Applicability

The FPL Manatee Plant is classified as a "fossil fuel fired steam electric plant of more than 250 million Btu/hr heat input", as defined in Table 62-212.400-1, F.A.C. Such facilities that emit more than 100 tons per year of any regulated pollutant are considered "major sources" in accordance with Rule 62-210.200(159), F.A.C. Modifications to major sources that result in net actual annual emissions increases greater than the PSD significant emission rates specified in Table 62-212.400-2, F.A.C. are subject to PSD major source

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

preconstruction review in accordance with Rule 62-212.400, F.A.C.

Rule 62-210.200(11), F.A.C. generally defines "actual emissions" as the average rate of emissions (in tons per year) for a two year period preceding a proposed project and which is representative of the normal operation of the emissions unit. For most emissions units, the actual emissions after completion of a proposed project are equal the potential emissions. However, for electric utility steam generating units (other than a new unit or the replacement of an existing unit), actual emissions following a physical or operational change, "... shall equal the representative actual annual emissions of the unit following the physical or operational change." Rule 62-204.800, F.A.C. incorporates by reference the following definition of "representative actual annual emissions" found in 40 CFR 52.21(b)(33):

"Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole."

Operators of electric utility steam generating units must provide annual reports to the Department demonstrating that the physical or operational change did not result in an emissions increase.

FPL provided the Department with the emissions rates presented in Table 1, which show that the firing of natural gas is expected to result in decreased emissions for all criteria pollutants on a short-term basis. Since long-term emissions are based on actual operation of the emissions units, FPL also provided a projection of its System Planning Projected Load Forecast. According to this information, the annual capacity factor for Units 1 and 2 have increased over the last several years from approximately 25% in 1997 to about 40% in 2001. The primary reason was shrinking reserve margin throughout the State of Florida. The company projects that the capacity factor will decrease back to about 20% in 2006. By that date, quite a number of new projects already permitted or under review will be complete, thus reducing the competitiveness of Units 1 and 2. Among these projects are very substantial capacity increases through natural gas re-powering at the FPL Sanford and Fort Myers Plants, which were projects that resulted in considerable emissions reductions.

The Department acknowledges FPL's projections regarding Units 1 and 2 at the Manatee Power Plant. Operation at or below the current annual capacity factors while firing natural gas would likely result less annual emissions than the past actual annual emissions from oil firing. Based on FPL's capacity projections, the anticipated short-term emission rates for gas firing, and the estimated annual emissions, the Department agrees that the addition of natural gas is not likely to result in an emissions increase from these units. In accordance with Rule 62-210.200(11), F.A.C., the Department will require FPL to submit annual reports for five years verifying that the gas project was not subject to PSD preconstruction review.

NSPS Subpart D Applicability

Manatee Units 1 and 2 were constructed in the early 1970's and began commercial operation in 1976 and 1977. In a letter dated January 26, 1976, EPA Region 4 informed FPL that the Manatee units were not subject to

Subpart D of the New Source Performance Standards. EPA stated that FPL provided evidence of binding contracts for the purchase of the units prior to the effective date of the regulations. Recent conversations with EPA Region 4 indicate that the addition of natural gas would not change this status with regard to the New Source Performance Standards.

Permit Requirements

As a fossil fuel fired steam electric generator with a heat input rate greater than 250 MMBtu per hour, Units 1 and 2 are subject to Rule 62-296.405, F.A.C. The following summarizes the requirements of this rule and conditions specified in the draft air construction permit.

Heat Input Rate: The maximum heat input rate from 100% natural gas firing will be limited to 5670 MMBtu per hour as requested by FPL. The maximum heat input from firing a combination of fuel oil and natural gas will be specified as 8650 MMBtu per hour, which is consistent with the current maximum rate for firing fuel oil.

<u>Particulate Matter</u>: Each boiler must comply with the particulate matter emissions standard (0.10 lb/MMBtu heat input) and visible emissions standard (40% opacity) specified in Rule 62-296.405, F.A.C. Natural gas contains little ash or sulfur, so particulate matter emissions from gas firing should readily comply with these requirements. Performance tests for particulate matter and opacity will be required to verify compliance with the standards. The test results for particulate matter will also provide information for the reporting of annual emissions.

Sulfur Dioxide: The Title V air operation permit currently regulates emissions of sulfur dioxide when firing fuel oil. For firing natural gas, the Department will establish a fuel sulfur specification of 10 grains of sulfur per 100 standard cubic feet of natural gas. This is consistent with the maximum fuel sulfur level allowed by the Department of Energy's Federal Energy Regulatory Commission, which regulates the interstate transmission of natural gas. Monthly verification and records of the average natural gas sulfur content will be required. The existing CEMS will be required for the reporting of annual sulfur dioxide emissions.

<u>Carbon Monoxide</u>: No standards for carbon monoxide are currently specified for FPL Manatee Units 1 and 2. Rule 62-296.405, F.A.C. for large utility boilers does not regulate emissions of this pollutant. Based on the burner manufacturer's predicted performance, emissions of carbon monoxide are expected to decrease by slightly more than 25% when firing natural gas. Performance tests will be required to provide information for the reporting of annual emissions.

<u>Volatile Organic Compounds</u>: At the high furnace temperatures associated with large utility boilers, emissions of volatile organic compounds are relatively low. Annual emissions reported for 2000 and 2001 averaged 149 tons per year when firing fuel oil. The firing of natural gas is expected to result in even lower emissions of volatile organic compounds. Rule 62-296.405, F.A.C. for large utility boilers does not regulate emissions of this pollutant. Performance tests will be required to provide information for the reporting of annual emissions.

Nitrogen Oxides: In accordance with Rule 62-296.405, F.A.C., emissions of nitrogen oxides (NOx) are limited to 0.30 lb/MMBtu based on a 30-day rolling average. This standard applies to oil firing, gas firing, or a combination of authorized fuels. Based on the burner manufacturer's predicted performance, the NOx emission rate for firing natural gas is expected to be 0.20 lb/MMBtu; however, the actual emissions rate is uncertain. FPL states that the contract with the manufacturer provided a guaranteed NOx emission rate of 0.30 lb/MMBtu for oil firing with liquidated damages should the burners fail to meet this performance specification. According to FPL, no such guarantee was provided for gas firing because:

- There is no emissions data available for gas firing because rig testing was not conducted when the burners were being manufactured.
- There are no operational baselines upon which to establish a guaranteed NOx emission rate because natural gas has never been fired in the Manatee units.
- At that time, FPL had no immediate or definite plans to fire natural gas, which would have made it

impossible to verify the NOx emission rate as part of any warranty performance testing for acceptance of the burners.

FPL maintains that there is reasonable assurance that NOx emission rate will be much less than 0.30 lb/MMBtu based on the similar boiler/burner configuration for the Martin Plant's Units 1 and 2, the manufacturer's predicted performance, and FPL's extensive experience with low-NOx burners on dual fuel boilers. The Department notes that this emission rate has been achievable with the similar boiler and burner configurations of Units 1 and 2 at the FPL Martin Power Plant. In addition, EPA's AP-42 emission factor reference document identifies average NOx emission rates of 0.14 lb/MMBtu for large utility boilers with low NOx burners. The Department has reason to believe that NOx emissions will be considerably reduced as a result of firing natural gas. The permit will establish a NOx limit of 0.30 lb/MMBtu based on a 30-day rolling CEMS average, which is consistent with the current limit. The existing CEMS will be required for the reporting of annual nitrogen oxides emissions.

Annual PSD Applicability Report: Pursuant to Rule 62-210.200(11), F.A.C., the permit will include the requirement to report annual emissions and compare to the past actual emissions. In accordance with 40 CFR 52.21(b)(33), the permit will allow the exclusion of "... that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole." Should the annual emission reporting indicate that the project resulted in PSD-significant emissions increases, the project will be subject to PSD preconstruction review in accordance with Rule and 62-212.400, F.A.C.

Concurrent Title V Revision

FPL requests a concurrent revision of the Title V operation permit to incorporate the above changes. The Department will provide a single public notice package for the air construction permit and the Title V operation permit revision. The public notice will allow 14 days for comment on the minor source air construction permit and 30 days for comment on the Title V operation permit revision. If no administrative hearing is requested and no comments are received that would result in substantial changes, air construction Permit No. 0810010-007-AC will be issued as a final permitting action and revised Title V operation Permit No. 0810010-008-AV will continue to the "Proposed Permit" phase of the Title V permitting process for final EPA review.

4. PRELIMINARY DETERMINATION

Based on the information provided by FPL, the Department determines that the addition of natural gas is not likely to cause an increase in actual annual emissions from the plant; therefore, the project is not subject to PSD preconstruction review. This procedure is available only to operators of electric utility steam generating units in accordance with the provisions of Rule 62-210.200(11)(d), F.A.C. and 40 CFR 52.21(b)(33). FPL must provide annual reports for five years verifying that PSD preconstruction review did not apply to the gas project. The Department strongly encourages FPL to actually use the newly available natural gas to help ameliorate the concerns regarding increasing emissions voiced by the residents of Manatee County during the course of this review. The Department specifically notes that this action does not create the possibility of future project exemptions from the rules for the Prevention of Significant Deterioration (Rule 62-212.400, F.A.C.) that are based on the concept that the units or the facility are capable of accommodating natural gas.

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the proposed draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the specific conditions of the draft permit. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DRAFT PERMIT

PERMITTEE:

Florida Power and Light 19050 State Road 62 Parrish, FL 34219

Authorized Representative:

Mr. Paul Plotkin, Plant General Manager

FPL Manatee Power Plant Air Permit No. 0810010-007-AC Facility ID No. 0810010 SIC No. 4911

Permit Expires: July 1, 2003

PROJECT AND LOCATION

Florida Power and Light owns and operates the Manatee Plant, which is an electrical power plant located at 19050 State Road 62 in Parrish (Manatee County), Florida. The UTM coordinates are: Zone 17, 367.25 km East, and 3054.15 km North (Latitude: 27° 36' 21" and Longitude: 82° 20' 44").

This permit authorizes the construction of natural gas facilities for existing fossil fuel fired steam generator Units 1 and 2. This permit supplements any previously issued air construction and operation permits for these units.

STATEMENT OF BASIS

The Department issues this air pollution construction permit under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The Department authorizes the permittee to install the proposed equipment in accordance with the conditions of the permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Section II. Administrative Requirements

Section III. Emissions Units Specific Conditions

Section IV. Appendices

(DRAFT)	
Howard L. Rhodes, Director Division of Air Resources Management	(Date)

FACILITY AND PROJECT DESCRIPTION

The existing facility is a steam-electric power plant consisting of the following emissions units.

EU ID	Emissions Unit Description
001	Unit 1 - Foster Wheeler fossil fuel fired steam generator (863 MW)
002	Unit 2 - Foster Wheeler fossil fuel fired steam generator (863 MW)
003	Emergency diesel generator and miscellaneous mobile equipment and internal combustion engines
004	Painting of plant equipment and non-halogenated solvent cleaning

This permit authorizes the construction of the infrastructure necessary to support the firing of natural gas for existing fossil fuel fired steam generator Units 1 and 2. Only Emissions Units 001 and 002 are affected by this permit.

REGULATORY CLASSIFICATION

Title III: The facility is a major source of hazardous air pollutants (HAP).

Title IV: The facility operates emissions units subject to the acid rain provisions of the Clean Air Act.

Title V: The facility is Title V major source of air pollution.

PSD: The facility is a major source of air pollution with respect to the requirements of the Prevention of Significant Deterioration (PSD) of Air Quality Program, Rule 62-212.400, F.A.C.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit, but are specifically related to the permitting action and are on file with the Department.

- Application Nos. 0810010-007-AC and 0810010-008-AV received on 05/10/02; complete.
- Title V Air Operation Permit No. 0810010-001-AV, which became effective on January 1, 1999.

SECTION II. ADMINISTRATIVE REQUIREMENTS (DRAFT)

- 1. <u>Permitting Authority</u>: Applications for permits to construct or operate shall be submitted to the Department's Bureau of Air Regulation at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. Copies of all such applications shall also be submitted to the Department's Southwest District Office and the Manatee County Environmental Management Department at the addresses listed below.
- 2. <u>Compliance Authority</u>: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Southwest District Office at 3804 Coconut Palm Drive in Tampa, Florida 33619-8218. Copies of all such documents shall also be submitted to the Manatee County Environmental Management Department at 202 Sixth Avenue East, Bradenton, FL 34208.
- 3. Appendices: The permit includes the following appendices:
 - Appendix CF Formats used to cite applicable rules, regulations, and previous permitting actions;
 - Appendix GC General conditions applicable to all state permits; and
 - Appendix SC: Standard conditions complied from applicable state regulations.
- 4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of each emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
- 5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 6. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department, prior to beginning such construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
- 7. <u>Title V Permit</u>: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A revision to the Title V operation permit is required to authorize regular operation of the regulated emissions units. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation with copies to the Compliance Authority. {Permitting Note: This condition was satisfied by the submittal of an application for a concurrent Title V revision.} [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. UNITS 1 AND 2

This permit affects the following existing emissions units.

EU ID	Emissions Unit Description
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2

Fossil fuel fired steam generators Unit 1 and Unit 2 are each nominal 800 megawatt (900 MW gross capacity, electric) steam generators designated as Manatee Plant Unit 1 and Unit 2. The emissions units are fired on a variable combination of natural gas, No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations. Propane is utilized primarily for ignition of the main fuel. When firing fuel oil (or combinations of authorized fuels), the maximum heat input for each boiler is 8650 MMBtu per hour. When firing natural gas alone, the maximum heat input for each boiler is 5670 MMBtu per hour.

Each emissions unit consists of a boiler that drives a turbine generator. Emissions are controlled with multiple cyclones, a flue gas recirculation system, and staged combustion. The twin register low-NOx burners (ABB Combustion Services, Ltd.) are dual fuel with mechanical atomization for oil firing. Each unit is equipped with a 499-foot stack and systems to continuously monitor and record emissions of nitrogen oxides and opacity.

{Permitting Note: These emissions units are regulated under Acid Rain, Phase II; and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 1 began commercial operation in 1976 and fossil fuel fired steam generator Unit 2 began commercial operation in 1977. These emissions units may inject additives such as magnesium oxide, magnesium hydroxide and related compounds into each boiler.}

CONSTRUCTION

- 1. Natural Gas Supply: The permittee is authorized to construct the natural gas supply lines and infrastructure necessary to support gas-fired operation of both Units 1 and 2. The existing burners for each unit are twin register low NOx burners manufactured by ABB Combustion Services, Ltd. (formerly International Combustion Limited). The low-NOx burner design incorporates air and fuel staging to reduce emissions of nitrogen oxides when firing either fuel oil or natural gas. Mechanical atomization is used to reduce droplet size for the efficient combustion of fuel oil. This permit authorizes the addition of natural gas as an allowable fuel for Units 1 and 2. It supplements all previously issued air construction and operation permits for these units. [Applicant Request]
- 2. <u>Unconfined Particulate Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

OPERATIONAL REQUIREMENTS

- 3. <u>Authorized Fuel</u>: Each unit is authorized to fire natural gas containing no more than 10 grains of sulfur per 100 standard cubic feet of natural gas. Natural gas may be fired alone or in combination with other authorized fuels. When available, the Department strongly encourages the permittee to fire natural gas as a clean-burning alternative to fuel oil. [Applicant Request; Rule 62-210.200(PTE), F.A.C.]
- 4. Permitted Capacity: When firing natural gas alone, the maximum heat input rate to each unit shall not exceed 5670 MMBtu per hour. When a blend of fuel oil and natural gas is fired, the maximum heat input to each unit shall not exceed 8650 MMBtu per hour. {Permitting Note: The heat input limitation has been placed in the permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110

A. UNITS 1 AND 2

percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability.} [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

5. <u>Hours of Operation</u>: The units may operate continuously on natural gas (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.]

EMISSIONS LIMITING STANDARDS

{Permitting Note: The following standards apply to each emissions unit.}

- 6. Particulate Matter: When firing natural gas, emissions of particulate matter shall not exceed 0.1 pounds per million Btu heat input as determined by EPA Methods 5, 5B, 5F, or 17, incorporated by reference in Chapter 62-297, F.A.C. [Rule 62-296.405(1)(b), F.A.C.]
- 7. <u>Nitrogen Oxides</u>: When firing natural gas, emissions of nitrogen oxides (NOx) shall not exceed 0.30 lb per million Btu. Compliance shall be demonstrated based on a 30-day rolling average as measured by the continuous emission monitoring system (CEMS). The CEMS must meet the performance specifications contained in 40 CFR 75. [Rule 62-296.405(1)(d), F.A.C.]
- 8. <u>Sulfur Dioxide</u>: Emissions of sulfur dioxide are limited by the fuel specification in Condition No. 3. The blending of natural gas shall not be used to demonstrate compliance with the sulfur dioxide standard for "liquid fuel" in Rule 62-296.405(c), F.A.C. [Rule 62-4.070(3), F.A.C.]
- 9. <u>Visible Emissions</u>: When firing natural gas or co-firing natural gas in combination with other authorized fuels, visible emissions shall not exceed 40 percent opacity as determined by DEP Method 9 and incorporated by reference in Chapter 62-297, F.A.C. [Rule 62-296.405(1)(a), F.A.C.]

TESTING AND MONITORING

10. <u>Test Methods</u>: All required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
EPA 5, 5B, 5F, or 17	Determination of Particulate Matter Emissions from Stationary Sources The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.
DEP 9	Visual Determination of the Opacity of Emissions from Stationary Sources
EPA 10	Determination of Carbon Monoxide Emissions from Stationary Sources
EPA 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
EPA 25 or 25A	Determination of Volatile Organic Concentrations

EPA methods are described in 40 CFR 60, Appendix A, and are adopted by reference in Rule 62-204.800, F.A.C. DEP Method 9 is specified in Rule 62-297.401, F.A.C. No other methods may be used for testing unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

A. UNITS 1 AND 2

- 11. <u>Initial Compliance Tests</u>: When firing 100% natural gas, the permittee shall conduct initial compliance tests to determine the emissions of particulate matter and level of opacity from Units 1 and 2. Test results shall demonstrate compliance with the applicable standards. A transmissometer calibrated in accordance with Rule 62-297.520, F.A.C., may also be used to demonstrate compliance with the visible emissions standard. Initial tests shall be conducted within 60 days after completing shakedown for each unit, but not later than 180 days after first fire on natural gas. [Rule 62-296.405(1)(e)1, F.A.C.]
- 12. Continuous Emissions Monitoring Systems: The permittee shall use the existing Continuous Emissions Monitoring Systems (CEMS) to report emissions of nitrogen oxides (NOx) and sulfur dioxide (SO₂). Compliance with the standard for nitrogen oxides shall be demonstrated based on data collected by the NOx CEMS. The NOx and SO₂ CEMS shall meet the performance specifications contained in 40 CFR 75. [Rule 62-4.070(3), F.A.C.]
- 13. Natural Gas: The permittee shall install, operate, and maintain a system to continuously monitor and record the amount of natural gas consumption and heat input. This system shall be designed to interact with the existing continuous emissions monitors. Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping monthly reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be the most recent versions of ASTM methods D4084-82, D3246-81 or other equivalent methods approved by the Department. [Rule 62-4.070(3), F.A.C.]
- 14. <u>Tests for Reporting Annual Emissions</u>: When firing natural gas, the permittee shall conduct performance tests to determine the emissions of carbon monoxide, particulate matter, and volatile organic compounds from Units 1 and 2. These tests shall be used to document the emission rates of these pollutants for use in the reports required by Condition No. 18. Tests shall be conducted at least once during each year the reports are required. [Rules 62-210.200(11)(d), 62-212.400(2)(d), and 62-297.100, F.A.C.]

NOTIFICATIONS

- 15. Construction Notifications: Within 15 days of beginning construction, the permittee shall notify the Compliance Authority that construction has commenced. Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has concluded. Each notification shall include an updated proposed schedule of activities through the initial shakedown period and the firing of natural gas. [Rule 62-4.070(3), F.A.C.]
- 16. <u>Test Notifications</u>: At least 15 days prior to the date on which each required test is to begin, the permittee shall notify the Compliance Authority of the date, time, and place of each test. The notification shall also include the name and phone number of the contact person who will be responsible for coordinating and having the tests conducted. [Rule 62-4.297.310(7)(a)9, F.A.C.]

REPORTS

- 17. Emissions Performance Test Reports: A report indicating the results of any required emissions performance test shall be submitted to each Compliance Authority no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 18. <u>PSD Applicability Report</u>: Before March 1st of each year, the permittee shall submit a report to the Bureau of Air Regulation and the Compliance Authority summarizing actual annual emissions for the previous year. The reports shall be used to verify the permittee's predictions of future representative actual annual

A. UNITS 1 AND 2

emissions. The reports shall be submitted for five separate years that are representative of normal postchange operations after completing construction of the natural gas project. The reports shall begin during the first year that natural gas is fired and continue for five years. Reports are subject to the following conditions.

a. The Department determines the "past actual emissions" for Units 1 and 2 as follows:

Pollutant	Past Actual Emissions Two-Year Average Tons per Year	Future Representative Actual Annual Emissions Calculation Methods
Carbon Monoxide (CO)	18,987	AOR (oil), Performance Test (gas)
Nitrogen Oxides (NOx)	8179	CEMS, Acid Rain Reporting
Particulate Matter (PM)	2384	Performance Tests (oil and gas)
Sulfur Dioxide (SO2)	31,753	CEMS, Acid Rain Reporting
Volatile Organic Compounds (VOC)	149	AOR (oil), Performance Test (gas)

Past actual annual emissions are based on: the two-year average for operation during 2000 and 2001; annual CO, PM, and VOC emissions reported in the certified Annual Operating Reports submitted by the permittee; and data collected by the Continuous Emissions Monitoring Systems for NOx and SO2 emissions as reported for the Acid Rain Program. Future actual annual emissions shall be based on: actual annual fuel combustion (heat input) rates; tested emission rates for CO (gas), PM (oil and gas), and VOC (gas); certified Annual Operating Report data for CO (oil) and VOC (oil); and data collected by the Continuous Emissions Monitoring Systems for NOx and SO2 emissions as reported for the Acid Rain Program. The calculation methodology shall remain consistent from year to year.

- b. In accordance with 40 CFR 52.21(b)(33)(ii), the permittee shall, "Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole." The permittee shall identify and quantify the excluded emissions and present a justification for the exclusion.
- c. Each report shall compare the actual emissions for the given year with the past actual annual emissions as described above. If the difference between the current actual annual emissions and the past actual annual emissions defined above is greater than the PSD significant emission rates defined in Table 212.400-2 of Chapter 62-212, F.A.C., then Units 1 and 2 shall be subject to a full PSD review at that time. This review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.

[Rules 62-204.800, 62-210.200(11) and 62-212.400, F.A.C.; 40 CFR 52.21(b)(33)(ii)]

SECTION IV. APPENDICES

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Appendix CF. Citation Format

Appendix GC. General Conditions

Appendix SC. Standard Conditions

SECTION IV. APPENDIX CF

CITATION FORMAT

The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

REFERENCES TO PREVIOUS PERMITTING ACTIONS

Old Permit Numbers

Example: Permit No. AC50-123456 or Air Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit

"AO" identifies the permit as an Air Operation Permit "123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located

"2222" represents the specific facility ID number

"001" identifies the specific permit project

"AC" identifies the permit as an air construction permit

"AF" identifies the permit as a minor federally enforceable state operation permit

"AO" identifies the permit as a minor source air operation permit

"AV" identifies the permit as a Title V Major Source Air Operation Permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality

"FL" means that the permit was issued by the State of Florida

"317" identifies the specific permit project

RULE CITATION FORMATS

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

SECTION IV. APPENDIX GC

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

- 1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida

SECTION IV. APPENDIX GC

GENERAL CONDITIONS

Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- 11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- 12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- 13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (NA);
 - b. Determination of Prevention of Significant Deterioration (NA); and
 - c. Compliance with New Source Performance Standards (NA).
- 14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
- 15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV. APPENDIX SC

STANDARD CONDITIONS

{Permitting Note: The following conditions apply to all emissions units and activities at this facility.}

EMISSIONS AND CONTROLS

- 1. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
- 2. <u>Circumvention</u>: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
- 3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) 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.]
- 4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
- 5. Excess Emissions Notification: In case of excess emissions resulting from malfunctions, the permitee shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
- 6. <u>VOC or OS Emissions</u>: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
- 7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and62-210.200(203), F.A.C.]
- 8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20 percent opacity. [Rule 62-296.320(4)(b)1, F.A.C.]
- 9. <u>Unconfined Particulate Emissions</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

TESTING REQUIREMENTS

10. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

SECTION IV. APPENDIX'SC

STANDARD CONDITIONS

- 11. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2), F.A.C.]
- 12. <u>Calculation of Emission Rate</u>: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- 13. Test Procedures: Tests shall be conducted in accordance with all applicable requirements of Chapter 62-297, F.A.C.
 - a. Required Sampling Time. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be thirty (30) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur.
 - b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.
 - c. Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.

[Rule 62-297.310(4), F.A.C.]

14. 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.]

- 15. <u>Sampling Facilities</u>: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C.
- 16. <u>Test Notification</u>: The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C.]
- 17. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]
- 18. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide

SECTION IV. APPENDIX SC

STANDARD CONDITIONS

sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

- 1. The type, location, and designation of the emissions unit tested.
- 2. The facility at which the emissions unit is located.
- 3. The owner or operator of the emissions unit.
- 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
- 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
- 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
- 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
- 8. The date, starting time and duration of each sampling run.
- 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used
- 10. The number of points sampled and configuration and location of the sampling plane.
- 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
- 12. The type, manufacturer and configuration of the sampling equipment used.
- 13. Data related to the required calibration of the test equipment.
- 14. Data on the identification, processing and weights of all filters used.
- 15. Data on the types and amounts of any chemical solutions used.
- 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
- 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
- 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
- 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
- 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

RECORDS AND REPORTS

- 19. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]
- 20. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

STATEMENT OF BASIS

FPL Manatee Power Plant DRAFT Permit No. 0810010-008-AV Revision of Title V Air Operation Permit No. 0810010-001-AV

PERMITTEE

Florida Power and Light-Manatee Power Plant 19050 State Road 62 Parrish, FL 34219

FACILITY DESCRIPTION

This facility consists of two fossil fuel steam generators, Unit 1 and Unit 2, each rated at 800 megawatts (MW) (900 MW gross capacity) output. The steam generators each burn a variable combination of No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations, discharging pollutants through a stack 499 feet above ground level. Each unit is a Foster-Wheeler oil fired steam generator, equipped with multiple cyclones, a flue gas recirculation system, staged combustion, and low-NOx burners. Each operates a Westinghouse tandem compound, reheat-type extraction turbine.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 12, 1996, this facility is a major source of hazardous air pollutants (HAPs).

PROJECT DESCRIPTION

The new Gulfstream Natural Gas Pipeline began commercial operation in June of 2002. The project brings natural gas that is compressed near Mobile Alabama and conveyed through an underwater pipeline on the continental shelf to markets in Florida. The new pipeline instantly increases the total natural gas transportation capacity into Florida from approximately 1.5 to 2.5 billion standard cubic feet, excluding Florida Gas Transmission Company's Phases V and VI projects. The pipeline enters Florida in Manatee County at a location that is particularly convenient to the FPL Manatee Plant.

As a direct result of the new pipeline, the FPL proposes to construct the infrastructure necessary to fire natural gas in existing fossil fuel fired steam generator Units 1 and 2. The request is being reviewed as an application for an air construction permit (No. 0810010-007-AC) and a concurrent revision to initial Title V air operation Permit No. 0810010-001-AV. FPL predicts that the addition of natural gas will not result in PSD-significant net emissions increases for any pollutant and therefore PSD does not apply. This procedure is available to operators of electric utility steam generating units and is allowed in accordance with the provisions of Rule 62-210.200(11)(d), F.A.C. and 40 CFR 52.21(b)(33). Based on the information provided by the applicant and the annual emissions estimates, the Department determines that the addition of natural gas is not likely to cause an increase in annual emissions from the plant. The draft Title V permit includes the following revisions:

- The Table of Contents and permit pages were renumbered accordingly.
- Natural gas is added throughout as an authorized fuel. See miscellaneous equipment descriptions throughout and revisions to existing Specific Condition Nos. A.1, A.3, A.9, A.16, A.24, Table 1-1, and Table 2-1.
- The maximum heat input from firing natural gas is identified as 5670 mmBtu per hour, as requested by the applicant. See emissions units description and Specific Condition A.1.
- The fuel sulfur content is limited to no more than 10 grains of sulfur per 100 standard cubic feet of natural gas. See Specific Condition Nos. A.9 and A.24. This is consistent with the maximum fuel sulfur level allowed by the Department of Energy's Federal Energy Regulatory Commission, which regulates the interstate transmission of natural gas. Compliance is demonstrated by keeping records of the fuel sulfur

STATEMENT OF BASIS

based on reports from the pipeline vendor. See Specific Condition No. A.24.

- Added new Specific Condition No. A.38, which added construction notifications regarding the gas project.
- Added new Specific Condition No. A.39, which requires initial compliance testing for particulate matter and opacity when firing natural gas.
- Added new Specific Condition No. A.39, which requires record keeping verify that the natural gas project was not subject to PSD.
- Changes to the current opacity, particulate matter, and nitrogen oxides emissions standards were not required.
- Updates Specific Condition No. A.27, Specific Condition No. A.35, Table 1-1, and Table 2-1 consistent with the administrative permit correction issued on July 16, 1998.
- Updates Specific Condition No. A.35 consistent with the administrative permit correction issued on September 14, 1998.
- Appendix H-1, "Permit History", was brought up to date.

AGENCY ACTION

The draft Title V air operation permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-213 of the Florida Administrative Code (F.A.C.).

Florida Power & Light Company Manatee Power Plant Facility ID No. 0810010 Manatee County

Title V Air Operation Permit

<u>DRAFT Permit No. 0810010-008-AV</u>

(Revision to Initial Title V Air Operation Permit No. 0810010-001-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: 850/488-0114 Fax: 850/922-6979

Initial Title V Air Operation Permit **DRAFT Permit No.** 0810010-008-AV

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Permittee:

Florida Power & Light Company

DRAFT Permit No. 0810010-008-AV Facility ID No. 0810010 SIC Nos. 49, 4911 Project: Revised Title V Air Operation Permit

This permit is for the operation of the Manatee Plant. This facility is located at 19050 State Road 62, Parrish, Manatee County; UTM Coordinates: Zone 17, 367.250 km East and 3054.150 km North; Latitude: 27° 36' 21" North and Longitude: 82° 20' 44" West.

STATEMENT OF BASIS: This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Previous administrative permit corrections incorporated into revised Title V permit:

Notice of Administrative Permit Correction dated 07/16/98 Notice of Administrative Permit Correction dated 09/14/98

Referenced attachments made a part of this permit:

Appendix U-1, List of Unregulated Emissions Units and/or Activities Appendix I-1, List of Insignificant Emissions Units and/or Activities Appendix TV-1, Title V Conditions (version dated 12/02/97)
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)
Table 297.310-1, Calibration Schedule (version dated 10/07/96)
Phase II Acid Rain Application/Compliance Plan received 12/6/95
Alternate Sampling Procedure: ASP Number 97-B-01
Order Granting Reduced Sampling Frequency, OGC Case Nos. 83-0580
and 83-0581, Order dated April 24, 1984
Order Extending Permit Expiration Date

Effective Date: January 1, 1999

Revision Date: (DRAFT)

Renewal Application Due Date: July 5, 2003

Expiration Date: December 31, 2003

(DRAFT)

Howard L. Rhodes, Director Division of Air Resources Management Florida Power and Light Company Manatee Plant Page 2 of 197

Section I. Facility Information.

Subsection A. Facility Description.

This facility consists of two fossil fuel steam generators, Unit 1 and Unit 2, each rated at 800 megawatts (MW) (900 MW gross capacity) output. The steam generators each burn a variable combination of <u>natural gas</u>, No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations, discharging pollutants through a stack 499 feet above ground level. Each unit is a Foster-Wheeler oil fired steam generator, equipped with multiple cyclones, a flue gas recirculation system and staged combustion. Each operates a Westinghouse tandem compound, reheat-type extraction turbine.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

Based on the initial Title V permit application received June 12, 1996, this facility is a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions.

E.U. ID		
No.	Brief Description	
001	Fossil Fuel Steam Generator, Unit 1	
002	Fossil Fuel Steam Generator, Unit 2	
Unregulated Emissions Units and/or Activities		
003	Emergency Diesel Generator, Miscellaneous Mobile Equipment and Internal	
	Combustion Engines	
004	Painting of Plant Equipment and Non-halogenated Solvent Cleaning Operations	

Please reference the Permit No., Facility ID No., and appropriate Emissions Units ID Nos. on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

These documents are on file with the permitting authority:

Initial Title V Permit Application received June 12, 1996

Additional Information Request dated May 13, 1997

Additional Information Response received August 15, 1997

DEP Letter to US EPA Region 4 dated March 10, 1998

US EPA Region 4 letter to DEP received March 25, 1998

Air Permit No. 0810010-007-AC issued on (DRAFT)

Florida Power and Light Company Manatee Plant Page 3 of 197

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

- 1. APPENDIX TV-1, TITLE V CONDITIONS, is a part of this permit. {Permitting note: APPENDIX TV-1, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
- 2. Not Federally Enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
- 3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1. & 4, F.A.C.]

- 4. Prevention of Accidental Releases (Section 112(r) of CAA). If required by 40 CFR 68, the permittee shall submit to the implementing agency:
 - a. a risk management plan (RMP) when, and if, such requirement becomes applicable; and

b. certification forms and/or RMPs according to the promulgated rule schedule.

[40 CFR 68]

- 5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit. [Rule 62-213.440(1), F.A.C.]
- 6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit. [Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]
- 7. Not Federally Enforceable. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. The owner or operator shall:
 - a. Tightly cover or close all VOC or OS containers when they are not in use.
 - b. Tightly cover all open tanks which contain VOC or OS when they are not in use.
 - c. Maintain all pipes, valves, fittings, etc., which handle VOC or OS in good operating condition.
 - d. Immediately confine and clean up VOC or OS spills and make sure wastes are placed in closed containers for reuse, recycling or proper disposal.

[Rule 62-296.320(1)(a), F.A.C.]

- 8. Not Federally Enforceable. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:
 - a. The facility shall construct temporary sandblasting enclosures when necessary, in order to perform sandblasting on fixed plant equipment.
 - b. Maintenance of paved areas as needed.
 - c. Regular mowing of grass and care of vegetation.
 - d. Limiting access to plant property by unnecessary vehicles.
 - e. Bagged chemical products are stored in concrete block buildings until they are used.
 - f. ____Spills of powdered chemical products are cleaned up as soon as practicable.
 - g. During construction, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary.

[Rule 62-296.320(4)(c)2., F.A.C., proposed by the applicant in the initial Title V permit application received June 12, 1996]

- **9.** When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of this permit, which defines day one. [Rule 62-213.440, F.A.C.]
- 10. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year. {See condition No. 51., Appendix TV-1, Title V Conditions} [Rule 62-214.420(11), F.A.C.]
- 11. <u>Submittals</u>. All reports, tests, notifications or other submittals required by this permit shall be submitted to the Department's Southwest District, Air Section:

Department of Environmental Protection Southwest District Office 3804 Coconut Palm Drive Tampa, FL 33619-8218 Telephone: 813/744-6100

Fax: 813/744-6458

Any reports, data, notifications, certifications and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency Region 4 Air, Pesticides & Toxics Management Division Operating Permits Section 61 Forsyth Street Atlanta, GA 30303 Phone: 404/562-9099

Phone: 404/562-909! Fax: 404/562-9095

Section III. Emissions Units and Conditions.

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

E.U. ID	
No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2

Fossil fuel fired steam generators Unit 1 and Unit 2 are each nominal 800 megawatt (900 MW gross capacity) (electric) steam generators designated as Manatee Plant Unit 1 and Unit 2. The emissions units are fired on a variable combination of <u>natural gas</u>, No. 6 fuel oil, No. 2 fuel oil, propane, and used oil from FPL operations. Propane is utilized primarily for ignition of the main fuel. When firing fuel oil <u>(or combinations of authorized fuels)</u>, the maximum heat input for each boiler is 8650 mmBtu per hour. When firing natural gas alone, the maximum heat input for each boiler is 5670 MMBtu per hour.

Each emissions unit consists of a boiler which drives a turbine generator. Emissions are controlled with multiple cyclones, a flue gas recirculation system and staged combustion. The twin register low-NOx burners (ABB Combustion Services, Ltd.) are dual fuel with mechanical atomization for oil firing. Each unit is equipped with a 499 foot stack.

{Permitting notes: These emissions units are regulated under Acid Rain, Phase II; and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 1 began commercial operation in 1976 and fossil fuel fired steam generator Unit 2 began commercial operation in 1977. These emissions units may inject additives such as magnesium oxide, magnesium hydroxide and related compounds into each boiler.}

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:

Unit No.	mmBtu/hr Heat Input	Fuel Type
1	8650	No. 2 or 6 Fuel Oil (Alone or w/Natural Gas)
	<u>5670</u>	Natural Gas (Alone)
2	8650	No. 2 or 6 Fuel Oil (Alone or w/Natural Gas)
	<u>5670</u>	Natural Gas (Alone)

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.; Permit No. 0810010-007-AC]

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

A.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition A.26 and A.27 of this permit.

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

- A.3. Methods of Operation Fuels.
 - a. Startup: The only fuels allowed to be burned are any combination of <u>natural gas</u>, No. 6 fuel oil, No. 2 fuel oil and propane.
 - b. Normal: The only fuels allowed to be burned are any combination of <u>natural gas</u>, No. 6 fuel oil, No. 2 fuel oil, propane and on-specification used oil from FPL operations.

When available, the Department strongly encourages the permittee to fire natural gas as a clean burning alternative to fuel oil.

[Rule 62-213.410, F.A.C.; Permit No. 0810010-007-AC]

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.]

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. <u>Visible Emissions</u>. Visible emissions shall not exceed 40 percent opacity. Emissions units governed by this visible emissions standard shall compliance test for particulate matter emissions annually.

[Rule 62-296.405(1)(a), F.A.C.; and OGC Case Nos. 83-0580 & 83-0581, Order dated April 24, 1984.]

A.6. <u>Visible Emissions - Soot Blowing and Load Change</u>. 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.

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this condition. [Rule 62-210.700(3), F.A.C., Note: these units have operational continuous opacity monitors.]

- A.7. <u>Particulate Matter</u>. 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.]
- A.8. 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.]
- A.9. Sulfur Dioxide. The sulfur content of fuel oils burned shall not exceed 1.0 percent by weight, as received at the plant. The sulfur content of natural gas shall not exceed 10 grains of sulfur per 100 standard cubic feet of natural gas. Permitting Note: The maximum fuel sulfur

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content of pipeline natural gas is 10 grains of sulfur per 100 standard cubic feet of natural gas. However, pipeline quality natural gas typically contains less than 1 grain of sulfur per 100 SCF of natural gas. The blending of natural gas shall not be used to demonstrate compliance with the sulfur dioxide standard for "liquid fuel" in Rule 62-296.405(c), F.A.C. See specific conditions A.9, A.15, A.23 and A.24 of this permit.

[Rules 62-213.440 and 62-296.405(1)(c)1.g., F.A.C., and applicant agreement with EPA on March 3, 1998, and Permit No. 0810010-007-AC]

A.10. Nitrogen Oxides. Nitrogen oxides emissions shall not exceed 0.30 pounds per million Btu heat input. Compliance shall be demonstrated based on a 30-day rolling average as measured by a continuous emission monitoring system (CEMS). The CEMS must meet the performance specifications contained in 40 CFR 75.

[Rules 62-296.405(1)(d)2. and (1)(d)4., F.A.C., AO 41-204804 and AO 41-219341, Issued August 30, 1993]

Excess Emissions

- **A.11.** 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.]
- **A.12.** 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.]

A.13. 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

A.14. Annual Tests Required. Except as provided in specific conditions **A.17** through **A.19** of this permit, emission testing for particulate emissions and visible emissions shall be performed annually, each federal fiscal year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

- A.15. 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 A.9, A.23 and A.24 of this permit. [Rule 62-296.405(1)(f)1.b., F.A.C.]
- A.16. 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

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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.
- (c) The permittee shall install, operate, and maintain a system to continuously monitor and record the amount of natural gas consumption and heat input. This system shall be designed to interact with the existing continuous emissions monitors.

[Rule 62-297.310(5) and 62-4.070(3), F.A.C.; Permit No. 0810010-007-AC]

- **A.17.** Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

 (a) General Compliance Testing.
 - 2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.
 - 3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - a. Did not operate; or
 - b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.
 - 4. During each federal fiscal year (October 1 September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - a. Visible emissions, if there is an applicable standard;
 - b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 100 tons per year or more of any other regulated air pollutant; and
 - c. Each NESHAP pollutant, if there is an applicable emission standard.
 - 5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid fuel, other than during startup, for a total of more than 400 hours.
 - 9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

- (b) <u>Special Compliance Tests</u>. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.
- (c) <u>Waiver of Compliance Test Requirements</u>. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C., SIP approved]

- **A.18.** When VE Tests Not Required. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:
 - a. only gaseous fuel(s); or
 - b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
 - c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-297.310(7)(a)4., F.A.C.]

- **A.19.** When PM Tests Not Required. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:
 - a. only gaseous fuel(s); or
 - b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
 - c. only liquid fuel(s) for less than 400 hours per year.

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

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.}

A.20. <u>Visible emissions</u>. 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 A.21 of this permit. VE testing shall be conducted in accordance with the requirements of specific condition A.27 of this permit. [Rule 62-296.405(1)(e)1., F.A.C.]

- **A.21.** <u>DEP Method 9</u>. 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 opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
 - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
 - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value. [Rule 62-297.401, F.A.C.]

- A.22. Particulate Matter. The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17. Particulate testing shall be conducted in accordance with the requirements of specific conditions A.26 and A.27 of this permit.

 [Rules 62-213.440, 62-296.405(1)(e)2., and 62-297.401, F.A.C.]
- A.23. Sulfur Dioxide. The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards. The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure authorized by permit, the permittee elected to demonstrate compliance using fuel sampling and analysis. See specific conditions A.9 and A.24 of this permit.

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[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.]

A.24. Fuel Sampling and Analysis Methods: The following fuel sampling and analysis protocol shall be used as an alternate sampling procedure authorized by permit to demonstrate compliance with the sulfur dioxide standard:

Compliance with the liquid fuel sulfur limit shall be verified by a fuel analysis provided by the vendor or performed by FPL upon each fuel delivery at the Port Manatee Fuel Oil Terminal with the following exception: in cases where No. 6 fuel oil is received with a sulfur content exceeding 1.0 percent by weight, and blending at the terminal is required to obtain a fuel mix equal to the applicable percent sulfur limit, an analysis of a fuel sample representative of fuel from the fuel storage tanks shall be performed by FPL prior to transferring oil to the Manatee plant. Reports of percent sulfur content of these analyses shall be maintained at the power plant facility.

The owner or operator shall maintain records of the as-fired fuel oil heating value, density or specific gravity, and the percent sulfur content. Fuel sulfur content, percent by weight, for liquid fuels shall be determined by either ASTM D2622-94, ASTM D4294-90 (95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 (or latest editions) to analyze a representative sample of the fuel oil.

Compliance with the fuel sulfur limit for natural gas shall be demonstrated by keeping monthly reports obtained from the vendor indicating the average sulfur content of the natural gas being supplied from the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be the most recent versions of ASTM methods D4084-82, D3246-81 or other equivalent methods approved by the Department.

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b., 62-4.070(3) and 62-297.440, F.A.C.; applicant agreement with EPA on March 3, 1998; Permit No. 0810010-007-AC]

A.25. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

A.26. Operating Rate During Testing. Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new

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test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rules 62-297.310(2) & (2)(b), F.A.C.]

A.27. Operating Conditions During Testing - PM and VE. When required, testing for particulate matter and visible emissions shall be conducted while firing No. 6 fuel oil at the maximum allowable rate of 8650 million Btu per hour, except as provided below. Particulate and visible emissions shall be conducted under both sootblowing and non-sootblowing conditions, and shall be conducted while injecting additives consistent with normal operating practices.

Testing may be conducted while firing No. 6 fuel oil at less than 90 percent of the maximum allowable rate; however, subsequent emissions unit operation is limited as described in specific condition A.26 of this permit.

[Rules 62-4.070(3) and 62-213.440 F.A.C., AO 41-204804 Specific Condition 5, AO 41-219341 Specific Condition 5]

A.28. <u>Calculation of Emission Rate</u>. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

A.29. Applicable Test Procedures.

- (a) Required Sampling Time.
 - 1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
 - 2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
- (b) <u>Minimum Sample Volume</u>. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
- (c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
- (d) <u>Calibration of Sampling Equipment</u>. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1 (attached to this permit).
- (e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

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A.30. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

A.31. <u>Testing While Injecting Additives</u>. The owner or operator shall conduct emission tests while injecting additives consistent with normal operating practices. [Rule 62-213.440, F.A.C., applicant agreement with EPA on March 3, 1998]

Record Keeping and Reporting Requirements

A.32. Excess Emissions - Malfunctions. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department's Southwest District, Air Section, in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department's Southwest District, Air Section.

[Rule 62-210.700(6), F.A.C.]

A.33. Excess Emissions - Reports. Submit to the Department's Southwest District, Air Section, a written report of emissions in excess of emission limiting standards for opacity and sulfur dioxide as set forth in Rule 62-296.405(1), F.A.C., for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C.]

A.34. Test Reports.

- (a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department's Southwest District, Air Section, on the results of each such test.
- (b) The required test report shall be filed with the Department's Southwest District, Air Section, as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- (c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department's Southwest District, Air Section, to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
 - 1. The type, location, and designation of the emissions unit tested.
 - 2. The facility at which the emissions unit is located.
 - 3. The owner or operator of the emissions unit.
 - 4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 - 5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 - 6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 - 7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 - 8. The date, starting time and duration of each sampling run.

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- 9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
- 10. The number of points sampled and configuration and location of the sampling plane.
- 11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
- 12. The type, manufacturer and configuration of the sampling equipment used.
- 13. Data related to the required calibration of the test equipment.
- 14. Data on the identification, processing and weights of all filters used.
- 15. Data on the types and amounts of any chemical solutions used.
- 16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
- 17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- 18. All measured and calculated data required to be determined by each applicable test procedure for each run.
- 19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
- 20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
- 21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

A.35. <u>Fuel Analysis Report</u>. The owner or operator shall, by the fifteenth day following each calendar month, submit to the Department's Southwest District, Air Section, a report of fuel analyses that are representative of each fuel received in the preceding month. The report shall document the heating value, density or specific gravity, and the percent sulfur content by weight of each fuel fired.

[Rule 62-4.070(3) and 62-213.440, F.A.C., AO 41-204804 Specific Condition 6, AO 41-219341 Specific Condition 6]

A.36. <u>COMS</u> for <u>Periodic Monitoring</u>. The owner or operator is required to install continuous opacity monitoring systems (COMS) pursuant to 40 CFR Part 75. The owner or operator shall maintain and operate COMS and shall make and maintain records of opacity measured by the COMS, for purposes of periodic monitoring.

[Rule 62-213.440, F.A.C., and applicant agreement with EPA on March 3, 1998]

Miscellaneous Conditions

- **A.37.** <u>Used Oil</u>. 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. On-specification Used Oil Allowed as Fuel: This permit allows the burning of used oil fuel meeting EPA "on-specification" used oil specifications, with a PCB concentration of less than 50 ppm, originating from FPL öperations. Used oil that does not meet the specifications for on-specification used oil shall not be burned at this facility.

On-specification used oil shall meet the following specifications: [40 CFR 279, Subpart B.]

Arsenic shall not exceed 5.0 ppm; Cadmium shall not exceed 2.0 ppm; Chromium shall not exceed 10.0 ppm; Lead shall not exceed 100.0 ppm; Total halogens shall not exceed 1000 ppm; Flash point shall not be less than 100 degrees F.

- b. Quantity Limited: The maximum total quantity of used oil that may be burned in both emissions units is 40,000 gallons in any consecutive 12-month period.
- c. <u>Used Oil Containing PCBs Not Allowed:</u> Used oil containing a PCB concentration of 50 or more ppm shall not be burned at this facility. Used oil shall not be blended to meet this requirement.
- d. PCB Concentration of 2 to less than 50 ppm: On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall be burned only at normal source operating temperatures. On-specification used oil with a PCB concentration of 2 to less than 50 ppm shall not be burned during periods of startup or shutdown.
- e. <u>Testing Required</u>: The owner or operator shall sample and analyze each batch of used oil to be burned for the following parameters:

Arsenic, cadmium, chromium, lead, total halogens, flash point, PCBs.

Testing (sampling, extraction and analysis) shall be performed using approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods), latest edition.

Split samples of the used oil shall be retained for three months after analysis for further testing if necessary.

[AO 41-204804 Specific Condition 9, and AO 41-219341 Specific Condition 9]

- f. Record Keeping Required: The owner or operator shall obtain, make, and keep the following records related to the use of used oil in a form suitable for inspection at the facility by the Department: [40 CFR 279.61 and 761.20(e)]
 - (1) The gallons of on-specification used oil received and burned each month. (This record shall be completed no later than the fifteenth day of the succeeding month.)
 - (2) The total gallons of on-specification used oil burned in the preceding consecutive 12-month period. (This record shall be completed no later than the fifteenth day of the succeeding month.)
 - (3) Results of the analyses required above.
- g. Reporting Required: The owner or operator shall submit to the Department's Southwest District, Air Section, within thirty days of the end of each calendar month in which used

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oil is burned, the analytical results and the total amount of on-specification used oil burned during the previous calendar month

The owner or operator shall submit, with the Annual Operation Report form, the analytical results and the total amount of on-specification used oil burned during the previous calendar year.

[Rules 62-4.070(3) and 62-213.440, F.A.C., 40 CFR 279 and 40 CFR 761, unless otherwise noted]

A.38. Construction Notifications: Within 15 days of beginning construction, the permittee shall notify the Compliance Authority that construction has commenced. Within 15 days of completing construction, the permittee shall notify the Compliance Authority that construction has concluded. Each notification shall include an updated proposed schedule of activities through the initial shakedown period and the firing of natural gas. [Rule 62-4.070(3), F.A.C.; Permit No. 0810010-007-AC]

A.39. Initial Compliance Tests for Gas Firing: When firing 100% natural gas, the permittee shall conduct initial compliance tests to determine the emissions of particulate matter and level of opacity from Units 1 and 2. Test results shall demonstrate compliance with the applicable standards. A transmissometer calibrated in accordance with Rule 62-297.520, F.A.C., may also be used to demonstrate compliance with the visible emissions standard. Initial tests shall be conducted within 60 days after completing shakedown for each unit, but not later than 180 days after first fire on natural gas. [Rule 62-296.405(1)(e)1, F.A.C.; Permit No. 0810010-007-AC]

A.40. PSD Applicability Report: Before MarchAugust 1st of each year, the permittee shall submit a report to the Bureau of Air Regulation and the Compliance Authority summarizing annual emissions for the previous year. The reports shall be used to verify the permittee's predictions of future representative actual annual emissions. made during the project to add natural gas. The reports shall be submitted for five separate years that are representative of normal post-change operations after completing construction of the natural gas project. The reports shall begin during the first year that natural gas is fired and continue for five years. Reports are subject to the following conditions.

a. The Department determines the "past actual emissions" for Units 1 and 2 as follows:

Pollutant	Past Actual Emissions Two-Year Average Tons per Year	Future Representative Actual Annual Emissions Calculation Methods
Carbon Monoxide (CO)	<u>18,987</u>	AOR (oil), Initial/Annual Performance Test (gas)
Nitrogen Oxides (NOx)	<u>8179 8762</u>	CEMS, Acid Rain Reporting
Particulate Matter (PM)	2384	AOR (oil); Initial Performance Tests (oil and gas)
Sulfur Dioxide (SO2)	<u>31,753</u>	CEMS, Acid Rain Reporting
Volatile Organic Compounds (VOC)	<u>149</u>	AOR (oil), Initial Performance Test (gas)

"Past actual annual emissions" are based on: the two-year average for operation during 2000 and 2001; annual CO, PM, and VOC emissions reported in the certified Annual Operating Reports submitted by the permittee; and data collected by the Continuous Emissions Monitoring Systems for NOx and SO2 emissions as reported indicated by the EPA Scorecard values for the Acid Rain Program. "Future actual annual emissions" shall be based on: actual annual fuel combustion (heat input) rates; tested emission rates for CO (gas), PM (oil and gas), and VOC (gas); a series of annual tested emission rates for CO (gas); certified Annual Operating Report data for CO (oil), PM (oil), and VOC (oil); and data collected by the Continuous Emissions Monitoring Systems for NOx and SO2 emissions as indicated by the EPA Scorecard values reported for the Acid Rain Program. The calculation methodology shall remain consistent from year to year.

- b. In accordance with 40 CFR 52.21(b)(33)(ii), the permittee shall, "Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole." The permittee shall identify and quantify the excluded emissions and present a justification for the exclusion.
- c. Each report shall compare the actual emissions for the given year with the past actual annual emissions as described above. If the difference between the current actual annual emissions and the past actual annual emissions defined above is greater than the PSD significant emission rates defined in Table 212.400-2 of Chapter 62-212, F.A.C., then Units 1 and 2 shall be subject to a full PSD review at that time. This review shall include a determination of the Best Available Control Technology (BACT) for each PSD-significant pollutant.
- d. Performance Test Methods: When firing natural gas, the permittee shall conduct performance tests to determine the emissions of earbon monoxide, particulate matter, and volatile organic compounds from Units 1 and 2. These tests shall be used to document the emission rates of these pollutants for use in the PSD Applicability Reports. Tests shall be conducted at least once during each year the reports are required. The test methods for particulate matter are specified in Condition A.22. The test method for carbon monoxide shall be EPA Method 10. The test method for volatile organic compounds shall be EPA Method 25 or 25A. Optionally, EPA Method 18 may be conducted in conjunction with EPA Method 25A to deduct emissions of methane and ethane. EPA methods are described in 40 CFR 60, Appendix A, and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used for testing unless prior written approval is received from the Department.

[Rules 62-204.800, 62-210.200(11), 62-212.400, and 62-297.100, F.A.C.; 40 CFR 52.21(b) (33)(ii); 40 CFR 60, Appendix A; Permit No. 0810010-007-AC]

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Section IV. This section is the Acid Rain Part.

Operated by:

Florida Power and Light Company

ORIS code:

6042

Subsection A. This subsection addresses Acid Rain, Phase II.

The emissions units listed below are regulated under Acid Rain, Phase II.

E.U. ID	
No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2

- A.1. The Phase II permit application(s) submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:
- a. DEP Form No. 62-210.900(1)(a), dated July 1, 1995. [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]
- A.2. Sulfur dioxide (SO₂) allowance allocations for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2000	2001	2002	2003
001	ID No. 01 PMT1	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	13654*	13654*	13654*	13654*
002	ID No. 02 PMT2	SO2 allowances, under Table 2 or 3 of 40 CFR Part 73	12581*	12581*	12581*	12581*

- * The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.
- A.3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.
 - 1. No permit revision shall be required for increase in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
 - 2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
- 3. Allowances shall be accounted for under the Federal Acid Rain Program. [Rule 62-213.440(1)(c), F.A.C.]

Florida Power and Light Company Manatee Plant Page 19 of 1<u>9</u>7

A.4. Fast-Track Revisions of Acid Rain Parts. Those Acid Rain sources making a change described at Rule 62-214.370(4), F.A.C., may request such change as provided in Rule 62-213.413, Fast-Track Revisions of Acid Rain Parts. [Rule 62-213.413, F.A.C.]

A.5. Comments, notes, and justifications: None.

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers (version dated 02/05/97)

Abbreviations and Acronyms:

°F: Degrees Fahrenheit

BACT: Best Available Control Technology

CFR: Code of Federal Regulations

DEP: State of Florida, Department of Environmental Protection

DARM: Division of Air Resource Management

EPA: United States Environmental Protection Agency

F.A.C.: Florida Administrative Code

F.S.: Florida Statute

ISO: International Standards Organization

LAT: Latitude LONG: Longitude

MMBtu: million British thermal units

MW: Megawatt

ORIS: Office of Regulatory Information Systems

SOA: Specific Operating Agreement **UTM**: Universal Transverse Mercator

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers, and ID numbers.

Code of Federal Regulations:

Example: [40 CFR 60.334]

Where: 40 reference to Title 40

CFR reference to Code of Federal Regulations

60 reference to Part 60

60.334 reference to Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: [Rule 62-213, F.A.C.]

Where: 62 reference to Title 62

62-213 reference to Chapter 62-213

62-213.205 reference to Rule 62-213.205, F.A.C.

ISO: International Standards Organization refers to those conditions at 288 degrees K, 60 percent relative humidity, and 101.3 kilopascals pressure.

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers (continued)

Identification Numbers:

Facility Identification (ID) Number:

Example: Facility ID No.: 1050221

Where:

105 = 3-digit number code identifying the facility is located in Polk County

0221 = 4-digit number assigned by state database.

Permit Numbers:

Example: 1050221-002-AV, or

1050221-001-AC

Where:

AC = Air Construction Permit

AV = Air Operation Permit (Title V Source)

105 = 3-digit number code identifying the facility is located in Polk County

0221 = 4-digit number assigned by permit tracking database

001 or 002 = 3-digit sequential project number assigned by permit tracking

database

Example: PSD-FL-185

PA95-01

AC53-208321

Where:

PSD= Prevention of Significant Deterioration Permit

PA = Power Plant Siting Act Permit

AC = old Air Construction Permit numbering

DRAFT Permit No. 0810010-008-AV **Facility ID No.** 0810010

Appendix I-1, List of Insignificant Emissions Units and/or Activities

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

	Brief Description of Emissions Units and/or Activities					
1.	Spent boiler chemical cleaning liquid evaporation.					
2.	Propane relief valves					
3.	Hydrazine mixing tank an relief valves.					
4.	Fuel oil storage tanks and related equipment.					
5.	Lube oil tank vents and extraction vents					
6.	Oil/water separators and related equipment					
7.	Miscellaneous mobile vehicle operation (cars, light trucks, heavy-duty trucks, backhoes, tractors,					
L	forklifts, cranes, etc.)					

Appendix H-1, Permit History/ID Number Changes

Permit History (for tracking purposes):

E.U.			Issue	Expiration	Extended	Revised
ID No.	Description	Permit No.	Date	Date	Date ^{1, 2}	Date(s)
001	Fossil Fuel Steam	AO41-204804*	08/30/93	01/14/97		05/27/97
	Generator, Unit 1	0810010-001-AV	05/29/98	12/31/03		
}		0810010-002-AV	(Revised Initial App	lication)		
		0810010-003-AV	Title V Administrat	ive Permit Corre	ction	<u>07/16/98</u>
		0810010-004-AV	Title V Administrat	ive Permit Corre	ction	09/14/98
		0810010-005-AC	12/22/99			
		0810010-006-AC	Pending			
		0810010-007-AC	(Draft) 08/12/02	(Draft) 07/01/		
				<u>2003</u>		
		0810010-008-AV	Revision of Title V	Permit No. 0810	010-001-AV	(Draft)
002	Fossil Fuel Steam	AO41-219341*	08/30/93	01/14/97		05/27/97
	Generator, Unit 2	0810010-001-AV	05/29/98	12/31/03		
		0810010-002-AV	(Revised Initial Application)			
		0810010-003-AV	Title V Administrati	ve Permit Corre	ction	<u>07/16/98</u>
		0810010-004-AV	Title V Administrati	ve Permit Corre	<u>ction</u>	<u>09/14/98</u>
		0810010-005-AC	12/22/99		_	
		0810010-006-AC	Pending			•
		0810010-007-AC	(Draft) 08/12/02	(Draft)		
	•			07/01/2003		
		0810010-008-AV	Revision of Title V	Permit No. 0810	010-001-AV	(Draft)

^{*} These permits were partially revised by Operation Permit Amendments, 0810010-002-AO.

ID Number Changes (for tracking purposes):

From: Facility ID No.: 40MAN410010

To: Facility ID No.: 0810010

Notes:

- 1 AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
- 2 AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96. {Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

DRAFT Permit No. 0810010-008-AV **Facility ID No.** 0810010

Appendix U-1, List of Unregulated Emissions Units and/or Activities

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

E.U. ID	
No.	Brief Description of Emissions Units and/or Activity
003	Emergency Diesel Generator, Miscellaneous Mobile Equipment and Internal Combustion
	Engines
004	Painting of Plant Equipment and Non-halogenated Solvent Cleaning Operations

Appendix S Permit Summary Tables

Table 1-1, Summary of Air Pollutant Emission Standards

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit	Brief Description
001	Fossil Fuel Steam Generator, Unit 1, heat input of 8650 mmBtu/hr on fuel oil
002	Fossil Fuel Steam Generator, Unit 2, heat input of 8650 mmBtu/hr on fuel oil

				sions		Equivalent Emissions		
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY	lb/hour TPY	Regulatory Citations	See Permit Condition(s)
VE Steady State	Gas, Oil, Propane	8760	40% opacity				Rule 62-296.405(1)(a), F.A.C.	A.5
VE 'Soot Blowing or Load Change	Gas, Oil, Propane	8760	60 % opacity (>60% opacity for not more than 4, six- minute periods				Rule 62-210.700(3), F.A.C.	A.6
PM Steady State	Gas/Oil , Propane	8760	0.1 lb/mmBtu			865 3,789, 865 43*	Rule 62-296.405(1)(b), F.A.C.	A. 7
PM Soot Blowing or Load Change	Gas/Oil , Propane	8760	0.3 lb/mmBtu			2,595, 1,421, 2;595 130*	Rule 62-210.700(3), F.A.C.	A.8

^{*} The equivalent annual emissions for propane are based on the expected annual usage of propane reported by the applicant primarily as a startup fuel. Propane usage is not limited by this permit.

DRAFT Permit No. 0810010-008-AV **Facility ID No.** 0810010

Appendix S Permit Summary Tables

Table 1-1, Summary of Air Pollutant Emission Standards, Continued

Emissions Unit	Brief Description
001_	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2

			Allowable Emissions			Equivalent Emissions ¹		
Pollutant	Fuels	Hours per Year	Standard(s)	lb/hour	TPY	lb/hour TPY	Regulatory Citations	See Permit Condition(s)
SO ₂	Oil, Propane	8760	1.1 lb/mmBtu			9,515 41,676 (oil) (oil)	Rules 62-213.440 & 62- 296.405(1)(c)1.g., F.A.C.	A.9
1	Gas	<u>8760</u>	10 gr S/100 SCF of gas			156; 683 (gas) (gas)	Permit No. 0810010-007-AC	<u>A.9</u>
NO _x	Gas/Oil, Propane	8760	0.30 lb/mmBtu			2;595; 11,366; 2;742 11,879	Rules 62-296.405(1)(d)2., F.A.C.	A.10

Notes:

¹ The "Equivalent Emissions" listed are for informational purposes only. Equivalent emissions are for each emissions unit.

Appendix S **Permit Summary Tables**

Table 2-1, Summary of Compliance Requirements

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit	Brief Description
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2

Pollutant or Parameter	Fuels	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
SO ₂	Gas, Oil	Fuel sampling & analysis	As received			Yes	A.9, A.15, A.23 & A.24
NO _x	Gas, Oil, Propane	Continuous Emissions Monitor	Continuous			Yes	A.10
PM	Gas, Oil, Propane	Rule 62-296.405(1)(e)2	Annual	July	3 hours		A.22, A.26 & A.27
VE	Gas, Oil, Propane	DEP Method 9	Annual	July	1 hour	Yes	A.20, A.21 & A.27
On-spec. Used Oil		Record Keeping and Analysis	As fired				A.37

Notes:

¹ Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C. ² CMS = continuous monitoring system

Memorandum

Florida Department of Environmental Protection

TO:

Clair Fancy, Chief, BAR

THROUGH:

Al Linero, Administrator - New Source Review Section

FROM:

Jeff Koerner, New Source Review Section 09 7/3

DATE:

July 3, 2002

SUBJECT:

FPL Manatee Power Plant

Draft Air Permit No. 0810010-007-AC

Construction of Natural Gas Infrastructure for Units 1 and 2

Draft Title V Permit Revision No. 0810010-008-AV Authorization to Fire Natural Gas in Units 1 and 2

Attached for your review are the following items:

• Intent to Issue Permit and Public Notice Package;

- Technical Evaluation and Preliminary Determination;
- Statement of Basis;
- Draft Construction and Title V Permits; and
- PE Certification

FPL proposes to construct the infrastructure necessary to fire natural gas in existing fossil fuel fired steam generator Units 1 and 2. FPL predicts that the change will not result any net emissions increases greater than the PSD significant emissions rates. The draft air construction permit authorizes the construction and requires record keeping to verify that the project was not subject to PSD. The concurrent draft Title V permit revision authorizes the firing of natural gas as an allowable fuel for Units 1 and 2. The Technical Evaluation and Preliminary Determination provides a detailed description of the project, rule applicability, and construction permit conditions. The Statement of Basis summarizes the changes made to the Title V operation permit. The P.E. certification briefly summarizes the proposed project.

Day #74 is July 22, 2002. I recommend your approval of the attached Draft Permit for this project.

CHF/AAL/jfk

Attachments

		U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)
SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	Received by (Please Print Clearly) B. Date of Delivery 8 30 02 Propagative Agent Addressee D. Isdelivery address different Martitem 1? Yes	Postage \$ Certified Fee Postmark Here
Article Addressed to:	If YES, enter delivery address below:	(Endorsement Required) Restricted Delivery Fee
Amy E. Stein, Chair Manatee County Board of County Commissioners		Total Postage & Fees Sent To
P.O. Box 1000 Bradenton, FL 34206-1000	3. Service Type Certified Mail	Amy E. Stein Street, Apt. No.; or POPO NOBOX 1000 City, State, ZiP+4 Bradenton, FL 34206-1000 PS Form 3800, January 2001 See Reverse for Instructions;
2001 0220 0001 21 22	4. Restricted Delivery? (Extra Fee) Yes	U.S. Postal Service
7001 0320 0001 3692 8024	<u> </u>	CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)
PS Form 3811, July 1999 Domestic Retu	rn Receipt 102595-00-M-0952	(Domestic Wall Only, No Insurance
		OFFICIAL USE
SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	Contified Fee
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 1. Article Addressed to:	A. Received by (Please Print Clearly) C. Signature Addressee D. Is delivery address different from item 1? Yes Yes No	Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required) Total Postage & Fees Sent To Clarence Troxell
Mr. Clarence Troxell 3321 Lakeside Circle Parrish, FL 34219		or PO Big 392 1 Lakeside Circle City, State AF Fish, FL 34219 PS Form 3800. January 2001 See Reverse for Instruction
•	3. Service Type Certified Mail	Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required)
	4. Restricted Delivery? (Extra Fee) Yes	Total Postage & Fees \$
^{2. A} 7001 0320 0001 3692 80	<u>17 · · · · · · · · · · · · · · · · · · ·</u>	m _{Sent To}
PS Form 3811, July 1999 Domestic R	eturn Receipt 102595-00-M-0952	Dan Kumarich Street Apt. No.; or PO BOX NB OX 660 City, State, ZiP+4 Parrish, FL 34219 PS Form 3800. January 2001 See Reverse for Instructions

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida, 32399-2400

P.E. CERTIFICATION STATEMENT

PERMITTEE .

Florida Power and Light 19050 State Road 62 Parrish, FL 34219 FPL Manatee Power Plant, Units 1 and 2
Draft Air Permit No. 0810010-007-AC
Construction of Natural Gas Infrastructure
Draft Title V Permit Revision No. 0810010-008-AV
Authorization to Fire Natural Gas

PROJECT DESCRIPTION

The applicant proposes to construct the infrastructure necessary to fire natural gas in existing fossil fuel fired steam generator Units 1 and 2. FPL predicts that the addition of natural gas will not result in PSD-significant net emissions increases for any pollutant and therefore PSD does not apply. This procedure is available to operators of electric utility steam generating units and is allowed in accordance with the provisions of Rule 62-210.200(11)(d), F.A.C. and 40 CFR 52.21(b)(33). Based on the information provided by the applicant and the annual emissions estimates, the Department determines that the addition of natural gas is not likely to cause any PSD-significant net annual emissions increases from the plant. The draft permit includes the following requirements:

- Requires monitoring and record keeping to verify that the project was not subject to PSD;
- Approves natural gas as an authorized fuel up to a maximum heat input rate of 5670 MMBtu per hour;
- Limits the fuel sulfur content to no more than 10 grains of sulfur per 100 standard cubic feet of natural gas; and
- Specifies opacity, particulate matter, and NOx standards consistent with Rule 62-296.405, F.A.C.

The applicant also requests a concurrent revision of the Title V operation permit that authorizes natural gas as an allowable fuel. The separate permitting actions are being processed under a single public notice package. The revised draft Title V operation permit includes the above requirements and updates the permit to incorporate two previous administrative permit corrections issued on July 16, 1998 and September 14, 1998.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

Jeffery F. Koerner, P.E.

Registration Number: 49441

7-3-02

(Date)