

November 6, 1998

Mr. Larry Johnson, P.E. Lee County Director, Environmental Services Division P.O. Box 398 Fort Myers. FL 33902 RECEIVED

NOV 1 6 1998

BUREAU OF
AIR REGULATION

Re: Emissions During Final Year of Construction FPL Fort Myers Repowering Project

Dear Larry:

We have reviewed the potential emissions from the repowered plant during the final year of construction, and have verified that the Prevention of Significant Deterioration (PSD) rules would not apply.

During the final year of construction (i.e., 2001), several of the combustion turbines (CTs) may be operated in simple cycle mode. The existing units 1 and 2 will also be capable of operation for several months during the early part of the year. Representative future actual emissions during this final year of construction are presented in Table 1 and compared to past actual emissions.

The operation during 2001 was estimated based on the construction schedule for the repowered facility. During this time period, Units 1 and 2 will be taken out of service to make steam turbine enhancements to accommodate the steam profile from the heat recovery steam generators. The maximum operating duration of the existing Units 1 and 2 are estimated to be 5 and 2 months, respectively. The operation of the CTs in simple cycle mode will be phased during the early part of 2001 with primary operation during the summer of 2001 to provide power not available from the existing units. Combined cycle operation will be possible during the last month of 2001 (i.e., December, 2001).

The CTs will not be able to operate in simple cycle mode during the tie in to the existing steam turbines which is scheduled for the fall of 2001. The maximum operating duration for CTs is as follows: CT2A - 8 months, CT2B - 7 months, CT2C - 8.5 months, CT2D - 7.5 months, CT2E - 6.5 months and CT2F - 5 months. The representative emissions are conservatively estimated based on 100 percent load for the possible months of operation. The net emissions changes during 2001 shows that for all pollutants except volatile organic compounds (VOC's), emissions decrease from past actual emissions. The emissions increase estimated for VOC's is 33 tons/year (TPY) which is less than the Prevention of Significant Deterioration (PSD) significant emission rate of 40 TPY. Therefore, PSD review is not applicable.

If you have any questions regarding this issue, please do not hesitate to contact me at (561) 691-7058.

Very truly yours,

Richard Piper

Repowering Licensing Manager Florida Power and Light Company

Cc:

Al Linero

FDEP / Tallahassee



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 0 3 1998

RECEIVED

4APT-ARB

NAV 05 1998

Mr. A. A. Linero, P.E.
Administrator
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

SUBJECT:

Request for approval of a Custom Fuel Monitoring Schedule for Florida Power & Light (FPL) - Fort Myers

Plant

Dear Mr. Linero:

Thank you for your letter of September 22, 1998, regarding the use of a custom fuel monitoring schedule for Florida Power & Light's Fort Myers Plant. FPL plans to operate six new combustion turbines which will be subject to 40 C.F.R. Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines and six new heat recovery steam generators which will be subject to 40 C.F.R. Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. requested. Specific Conditions 29 and 42 have been reviewed and Region 4 has concluded that the custom fuel monitoring schedule proposed in Specific Condition 42 is acceptable, however, there are some details of the approval that must be clarified by adding more detail to the permit. In the following paragraphs, we have outlined an acceptable custom fuel monitoring schedule that is consistent with previously issued guidance and suggested clarifications to the permit condition. Additionally, Specific Condition 29 was reviewed, and we found it lacking in certain details. The information which should be added to Specific Condition 29 is also in this letter.

According to 40 C.F.R. 60.334(b)(2), owners and operators of stationary gas turbines subject to Subpart GG are required to monitor fuel nitrogen and sulfur content on a daily basis if a company does not have intermediate bulk storage for its fuel.

40 C.F.R. 60.334(b)(2) also contains provisions allowing owners

future, however, we believe that it is important to make the sampling waiver contingent upon adherence to Part 75 monitoring requirements because inconsistencies between the monitoring conducted for Part 60 and 75 purposes could arise in the future if the Part 75 provisions are ever revised or updated.

Specific Condition 29 involves the method used to monitor nitrogen oxides (NO<sub>x</sub>) excess emissions. Under the provisions for 40 C.F.R. §60.334(c)(1), the operating parameters used to identify NO<sub>x</sub> excess emissions for Subpart GG turbines are waterto-fuel injection rates and fuel nitrogen content. As an alternative to monitoring NO, excess emissions with these parameters, FPL is proposing to use a NO<sub>x</sub> continuous emission monitoring system (CEMS) that is certified for measuring NO, emissions under 40 C.F.R. Part 75. Based upon the enclosed determination issued by EPA on March 12, 1993, NO, CEMS can be used to monitor excess emissions from Subpart GG turbines if a number of conditions specified in the determination are met and included in the permit conditions. Since the combustion turbines are regulated by 40 C.F.R. Part 60, Subpart GG as well as the requirements of the construction permit, the NSPS NO<sub>x</sub> emission limit, with its appropriate averaging time, should be included in Specific Condition 29.

Finally, a NO<sub>x</sub> CEMS used to conduct excess emission monitoring for Subpart GG must be capable of correcting results to ISO standard day conditions (i.e., 288 degrees Kelvin, 60 percent relative humidity, and 101.3 kilopascals pressure). basis for this requirement is that, under the provisions of 40 C.F.R.  $\S60.335(c)$ ,  $NO_x$  results from performance tests must be converted to ISO standard day conditions. As an alternative to continuously correcting results to ISO standard day conditions, FPL could keep records of the data needed to make this conversion, so that  $NO_x$  results could be calculated on an ISO standard day condition basis anytime at the request of EPA or the Florida DEP. This approach will be acceptable, since the Construction (non-PSD) permit contains NO<sub>x</sub> limits that are more stringent than those in Subpart GG, and compliance with Subpart GG for these units would be a concern only in cases when a turbine is in violation of the NO<sub>x</sub> limits in its permit. Therefore, converting  $\mathrm{NO}_{\mathsf{x}}$  results to ISO standard day conditions when the CEMS indicates an exceedance of the applicable permit limits, rather than converting results continuously, will provide and operators of turbines that do not have intermediate bulk storage for their fuel to request approval of custom fuel monitoring schedules that require less frequent monitoring of fuel nitrogen and sulfur content. The basis for dropping the requirement to sample the gas burned in the turbine addressed by this determination is that  $SO_2$  emissions from the turbine will be monitored in accordance with acid rain requirements in 40 C.F.R. Part 75.

Region 4 reviewed Specific Condition 42 which stated "SO2 emissions shall be quantified pursuant to the monitoring plan approved by the Environmental Protection Agency (EPA) Acid Rain Division for firing only pipeline quality natural gas" and this plan was intended to be followed in lieu of daily sampling as required by 40 C.F.R 60.334(b). First, the January 16, 1996, Region 5 determination you are referring to is enclosed in the permits appendix and instead the monitoring plan should be written directly into the permit condition including all the appropriate limiting conditions (see below). Additionally, after reviewing the determination issued by Region 5 in 1996, we have concluded that dropping the requirement to periodically measure the sulfur content of the natural gas would only be acceptable under the following conditions:

- 1. FPL must be in possession of an approved Phase II acid rain permit for the six new combustion turbines.
- 2. An acid rain monitoring plan that has been certified by signature of the Designated Representative for FPL must be submitted, and the monitoring plan must list pipeline quality natural gas as the primary fuel for the six new combustion turbines.
- 3.  $SO_2$  emissions must be measured using monitoring systems that have been certified by EPA in accordance with 40 C.F.R. Part 75.

Since the Part 75 monitoring requirements do not, at the present time, require periodic sampling to determine the sulfur content of pipeline quality natural gas, we would not be opposed to approval of the sampling waiver requested by FPL if the above conditions are met. In order to ensure consistency between the monitoring performed for Subpart GG and for Part 75 in the

adequate assurance of compliance with the  $NO_{\rm x}$  limit in Subpart GG. For clarification, these recordkeeping and monitoring conditions must be written specifically into the permit conditions.

If you have any questions regarding the determination provided in this letter, please call David McNeal of my staff at 404/562-9102.

Sincerely,

R. Douglas Neeley

Chief

Air and Radiation Technology Branch

ouglas Neeley

Air, Pesticides and Toxics Management Division

#### Enclosure

(1) March 12, 1993, Headquarter's guidance regarding the use of CEMS to monitor  $NO_x$  excess emissions under Subpart GG

### **Determination Detail**

Control Number: 9400024

**NSPS** Category: **EPA Office: SSCD** 

Date:

03/12/1993

Title:

NSPS Subpart GG, Alternative Method

Recipient: Karl Mangels Author:

Rasnic, John B.

Comments:

#### Abstract:

Can a gas turbine subject to NSPS subpart GG, and using both water injection and selective catalytic reduction to control NOx emissions use a CEMS.

Yes, the alternative of using a CEMS was approved.

#### Letter:

#### **MEMORANDUM**

SUBJECT: Approval of the Use of NOx CEMS as an Alternative Method to the Water-fuel Ratio Monitoring under NSPS Subpart GG

FROM: John B. Rasnic, Director Stationary Source Compliance Division Office of Air Quality Planning and Standards

To: Karl Mangels, Chief New York Compliance Section Air Compliance Branch, Region II

In response to your January 12, 1993, memorandum to Linda Lay, SSCD investigated the feasibility of our approval of your request. You asked SSCD to approve a request from East Syracuse Generating Company to allow the use of the NOx continuous emission monitoring system (CEMS) as an alternative monitoring method to the continuous water-fuel ratio monitoring method.

East Syracuse Generating Company is to commence development of a 100 MW natural gas-fired cogeneration combustion turbine facility in the village of East Syracuse, New York. The facility is allowed to use a limited amount of low sulfur distillate oil as a backup fuel. To control the emissions of NOx this turbine will use both water injection and selective catalytic reduction as required by the New York State

Department of Environmental Conservation (NYSDEC). Since the NYSDEC permit conditions are more restrictive than the requirements of NSPS Subpart GG, East Syracuse is asking for a waiver from the following monitoring requirements:

- 1. Fuel sulfur monitoring
- 2. Fuel nitrogen monitoring
- 3. Continuous water-fuel ratio monitoring for Nox compliance.

You have already made determinations on the first two issues and asked SSCD to address only the third issue, use of NOx CEMS, that is required by the State permit, instead of the water-fuel ratio monitoring method.

SSCD determined that the use of a NOx CEMS can be allowed as an alternative monitoring method if the facility meets the following conditions:

- \* Each turbine meets the emission limitation (STD) determined according to 40 CFR Part 60.332. The "Y" value for the applicable equation and supporting documentation should be provided by the applicant and the limitation for NOx emissions from pipeline quality natural gas should be fixed by EPA assuming the "F" value equals 0. The emission limitation shall be expressed in ppmv, dry, corrected to 15 percent 02.
- \* Each N0x CEMS meets the applicable requirements of 40 CFR 560.13, Appendix B, and Appendix F for certifying, maintaining, operating and assuring quality of the system.
- \* Each N0x CEMS must be capable of calculating N0x emissions concentrations corrected to 15% 02 an IS0 conditions.
- \* Monitor data availability shall be no less than 95 percent on the quarterly basis.
- \* N0x CEMs should provide 4 data points for each hour and calculate a 1-hour average.
- \* Each owner or operator of a N0x CEMS shall submit an excess emissions (calculated according to the requirements of paragraph 60.13(h)) and monitoring systems performance report and/or a summary report form to the Administrator on a quarterly basis, if excess emissions are determined, or semiannually. The report shall be postmarked by the 30th day following the end of each reporting period. Written reports shall include information required in paragraphs 60.7 (c) and 60.7 (d). This report shall also contain the content of nitrogen in fuel oil for each reporting period when oil is fired and a clearly calculated corresponding emission limitation (STD).
- \* Recordkeeping requirements shall follow the requirements specified in 40 CFR 560.7.

In addition, to upgrade the EPA data, we recommend that the N0x CEMS be used to demonstrate compliance with the emission limitation on a continuous basis and that the quarterly report include the N0x mass emissions for the reported period as reported to the State.

If you have any questions, please call Zofia Kosim at 703-308-8733.

cc: Air, Pesticides, and Toxics Management Division Directors Regions I and IV

Air and Waste Management Division Director

Region II

Air, Radiation, and Toxics Division Director Region III

Air and Radiation Division Director Region V

Air, Pesticides, and Toxics Division Director Region VI

Air and Toxics Division Directors Regions VII, VIII, IX, and X



# RECEIVED

NOV U 6 1998

November 2, 1998

BUREAU OF AIR REGULATION

Mr. Clair Fancy, P.E. State of Florida Department of Environmental Protection Division of Air Resources Management 2600 Blair Stone Road Tallahassee, FL 32399-2400

Re: FPL Fort Myers Plant

**Draft Air Construction Permit #0710002-004AC** 

Dear Mr. Fancy:

This correspondence provides comments regarding the subject draft Air Construction Permit for the Fort Myers power plant, which was received by FPL on September 18, 1998. I would like to thank Al Linero, of your staff, for meeting with me and several members of the repowering organization on October 28<sup>th</sup> to discuss this permit.

Following are our revised comments to various Specific Conditions. Several issues were resolved during the meeting; these comments document the discussions we had during the meeting. Language requested to be deleted is stricken; suggested new language is in **boldface type**.

Specific Condition 9 <u>Turbine Capacity</u>: The maximum heat input rates, based on the lower heating value (LHV) of the fuel to each combustion turbine at <u>ambient compressor inlet</u> conditions of 59°F, 60% relative humidity, 100% load, and 14.7 psia shall not exceed 1,600 1,760 million Btu per hour, (mmBtu / hr). The maximum heat input rate will vary depending upon turbine inlet conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other <u>ambient compressor inlet</u> conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. Also see the rational for specific condition 18. [Design, Rule 62-210.200, F.A.C. (Definitions – Potential Emissions)].

Rationale: In order to allow for degradation of combustion turbine components, an appropriate heat input limitation for the permit is 1,760 mmBtu / hour. Also, since inlet foggers will be used as part of this project, it is appropriate to reflect the "fogged" condition in the correction to ISO conditions. Using the compressor inlet temperature, rather than ambient, will accomplish this. There will be no impact on the environment, since the 9ppm / 65 lb. / hour limitations will still apply.

Specific Condition 22 Volatile Organic Compounds (VOC) Emissions: The concentration of VOC in the exhaust gas shall not exceed 1.4 ppmvd as measured by EPA Methods 18 or 25A. VOC emissions (at ISO conditions) shall not exceed 2.9 lb. / hr (per CT) to be demonstrated by annual EPA Method 18 or 25A stack test. The VOC emissions shall be exclusive of background concentrations in the ambient air.

Rationale: The background concentrations of VOC in the ambient air should be subtracted from the measured VOC in the exhaust stream.

Specific Condition 24 Excess Emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during both "cold startup". to or shutdowns from combined cycle operation. During startup of individual CTs, up to 4 hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to four twelve hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to three hours of excess emissions are allowed. Cold startup is defined as a startup to combined cycle operation following a complete shutdown lasting at least 48 hours. [Applicant Request, G.E. Combined cycle startup Curves Data and Rule 62-210.700, F.A.C. (It is estimated that, on average, there will be approximately 12 startups to combined-cycle operation per year)].

Rationale: FPL and our design-engineering firm, Black & Veatch, have identified a requirement for extended startup excess emission allowances during startups to combined-cycle operation. Because of the unique configuration of the Fort Myers repowered plant, (i.e. 2,400 lb. HRSGs and a large heavy-framed steam turbine (400MW nominal)), FPL, Black & Veatch, Foster Wheeler and GE are concerned about the limitations of both the HRSGs and the 430MW steam turbine with respect to the "ramp rate" for both steam turbine and HRSG metal temperatures.

The suggested language allows FPL the flexibility to start up and operate the new facility and to gain operational experience with this new configuration. Furthermore, Rule 62-210.700(5) provides a basis for this flexibility: "Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest."

Specific Condition 28. Add:

 EPA Method 19. "Determination of ... Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates". Method 19 shall be used for the calculation of lb / mmBtu and 40 CFR 75 shall be used to calculate mmBtu / hour and lb / hour emission rates from stack tests.

Rationale: This clarifies the procedure for calculating lb / hour, so that in the future, no ambiguity exists during compliance testing.

Specific Condition 31. <u>Compliance with CO emission limit</u>: An initial test for CO, shall be conducted concurrently with the initial NOx test, as required. The initial NOx and CO test results shall be the average of three valid <del>one-hour</del> runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual NOx RATA testing which is performed pursuant to 40 CFR 75.

Comment: The requirement for three, one-hour runs for the NOx test appears to reflect the requirements of EPA Method 7E rather than Method 20. Note that Method 20 is specified as the NOx test method in Specific Condition 28. Method 20 requires an O<sub>2</sub>-CO<sub>2</sub> traverse, then the 8 points with the lowest %O<sub>2</sub> are sampled for only about 1 minute each (rather than 1 hour). Note that 40 CFR 60.335 requires Method 20 to be used; but Method 20 doesn't require 1-hour test run's. The same section of the CFR requires a NOx analyzer span of 0-300ppm; however FPL wishes to retain the right to use smaller spans, such as 0-250 or even 0-25 ppm, either of which are inherently more accurate than 0-300ppm.

Specific Condition 33 <u>Testing Procedures</u>: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average turbine Intel compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient compressor inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. turbine compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient compressor inlet temperature) and 105 percent of the value reached during the test 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 purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204.800 F.A.C..

Rationale: These combustion turbines will have inlet foggers which will lower the effective temperature "seen" by the combustion turbine compressor. It is therefore appropriate to use these values, rather than ambient values, for comparison with heat input.

FPL and Black & Veatch have refined the design of the fuel gas heaters. The exact configuration could involve from 2 to 6 heaters, depending on the selected location; i.e., in the gas yard or adjacent to the combustion turbines. The combined heat input and emissions from the gas heaters will not exceed that included in our initial application.

FPL and Black & Veatch have recently identified the need to add a diesel-fired water pump to the site for the purpose of fire protection. This would be a backup pump to the normal fire protection system and would only be used in an emergency or for testing required by NFPA regulations (1-2 hrs / month). It is exempt from permitting since it qualifies for a categorical exemption under State Rule 62-210.300(3)(a)22. — Fire and Safety equipment. For the Department's information, the following emission rates and fuel consumption rates are planned for this piece of equipment:

Fuel consumption 19.7 gallons per hour VOC 170 grams per hour NOx 2850 grams per hour CO 1010 grams per hour SO2 250 grams per hour Particulate matter 80 grams per hour

I look forward to discussing these issues with your at your earliest convenience. Please do not hesitate to contact me at (561) 691-2787 or Rich Piper at (561) 691-7058.

Very truly yours,

W. L. Yeager

General Manager, Combustion Turbines

Florida Power & Light Company

# FPL ENVIRONMENTAL SERVICES DEPARTMENT PO BOX 14000; JUNO BEACH, FL 33408

DATE: November 2,1998
SEND TO:  NAME: AL LINERO
COMPANY: F⊅€P
FAX NUMBER: 850 922 6979
FROM: RICHARD PIPER
FPL ENVIRONMENTAL SERVICES
PHONE: (561) 691-7058 FAX: (561) 691-7070
rich_piper@fpl.com
NUMBER OF PAGES INCLUDING FAX COVER: 4
MESSAGE: A.
AL ~
44-
Per my voicemail and pursuant to our meeting last week. Please let me know your thoughts. Thanks-
Per my voicemail and pursuant to our meeting last week. Please let me know your thoughts. Thanks -
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Florida Power & Light Company, P. O. Box 430, Fort Myers, FL 33902

November 2, 1998

Mr. Clair Fancy, P.E. State of Florida Department of Environmental Protection Division of Air Resources Management 2600 Blair Stone Road Tallahassee. FL 32399-2400

Re: FPL Fort Myers Plant

Draft Air Construction Permit #0710002-004AC

#### Dear Mr. Fancy:

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Rationale: In order to allow for degradation of combustion turbine components, an appropriate heat input limitation for the permit is 1,760 mmBtu / hour. Also, since inlet foggers will be used as part of this project, it is appropriate to reflect the "fogged" condition in the correction to ISO conditions. Using the compressor inlet temperature, rather than ambient, will accomplish this. There will be no impact on the environment, since the 9ppm / 65 lb. / hour limitations will still apply.

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Very truly yours,

W. L. Yeager`

General Manager, Combustion Turbines

Florida Power & Light Company



### RECEIVED

MOV 06 1998

BUREAU OF AIR REGULATION

November 2, 1998

Mr. R. Douglas Neeley, Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics Management Division
United States Environmental Protection Agency
Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8909

Re: Submittal of Revised Phase II Acid Rain Permit Application

**FPL Fort Myers Repowered Plant** 

Dear Mr. Neeley:

Enclosed please find the subject Title IV permit application for the repowered Fort Myers facility.

The existing Fort Myers plant has been in operation since the late 1950's. The two existing Phase II steam boiler units will be repowered within the next 2 years. The boilers will be retired and dismantled, while the steam turbines and electric generators will remain. The repowered facility will be a combined-cycle natural gas-fired plant. Steam produced in new Heat Recovery Steam Generators (HRSGs) will be used to drive the existing steam turbines and electric generators. Significant reductions in actual emissions will occur as a result of this project.

The attachment to the enclosed Phase II application provides information regarding the schedule for the retirement of the existing emissions units and startup of the new units. Should you have any questions regarding this submittal, please do not hesitate to contact me at (561) 691-7058.

Very truly yours,

Richard Piper

Repowering Licensing Manager Florida Power & Light Company

Cc: Clair Fancy

FDEP - Tallahassee

### **Phase II Permit Application**

Page 1

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is: 

New

M Revised

Compliance Plan

STEP 1 Identify the source by plant name, State, and ORIS code from NADB

Plant Name Fort Myers Plan	t State FL	ORIS Code 612	

STEP 2
Enter the boiler ID#
from NADB for each
affected unit, and
indicate whether a
repowering plan is
being submitted for
the unit by entering
"yes" or "no" at
column c. For new
units, enter the requested information
in columns d and e

a b c		<b>d</b> 	e	
Boiler ID#	Unit Will Sold Allow- ances in Accordance	Repowering Plan	New Units	New Units
	with 40 CFR 72.9(c)(1)		Commence Operation Date	Monitor Certification Deadline
PFM1	Yes	N/A	N/A	N/A
PFM2	Yes	N/A	N/A	NA
PFM2CTA	Yes	N/A	1/1/2001	4/1/2001
PFM2CTB	Yes	N/A	2/1/2001	5/1/2001
PFM2CTC	Yes	N/A	3/1/2001	6/1/2001
PFM2CTD	Yes	N/A	4/1/2001	7/1/2001
PFM2CTE	Yes	N/A	5/1/2001	8/1/2001
PFM2CTF	Yes	N/A	6/1/2001	9/1/2001
	Yes			

STEP 3 Check the box if the response in column c of Step 2 is "Yes" for any unit

For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

DEP Form No. 62-210.900(1)(a) - Form Effective: 7-1-95

9837537Y/F2/ACID-P2 (12/6/95)

Plant Name (from Step 1)

STEP 4 Read the standard requirements and certification, enter the name of the designated representative, and sign and date

#### Standard Requirements

#### Permit Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall: (i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320,

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit; The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and (ii) Have an Acid Rain Part.

#### Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

#### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
- (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
  (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide

- shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide

- requirements as follows:

  (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or

  (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

#### Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

(i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

(ii) All emissions monitoring information, in accordance with 40 CFR part 75;

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from Step 1)

#### Recordkeeping and Reporting Requirements (cont.)

- (iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

#### Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- operators of such source and of the Acid Hain units at the source.

  (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

  (7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a
- separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
  (2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by
- (2) Emitting the number of allowances a unit carrifold, provided, that the infiline of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
  (3) Requiring, a change of any kind in any State law regulating electric utility, rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

#### Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment (see Attachment).

Name <b>David</b>	d W Knutson	
Signature	Hand Thinkson	Date 10-29-98

Phase II Permit-Page 4

STEP 5 (optional) Enter the source AIRS and FINDS identification numbers, if known

	 	•			
AIRS					
FINDS					

DEP Form No. 62-210.900(1)(a) - Form Effective: 7-1-95

# ATTACHMENT TO THE PHASE II APPLICATION FLORIDA POWER & LIGHT COMPANY -FORT MYERS PLANT

The units identified in this application are being constructed as part of the repowering of existing units PFM1 and PFM2. The new units (PFM2CTA, PFM2CTB, PFM2CTC, PFM2CTD, PFM2CTE and PFM2CTF) are combustion turbines (CTs) with heat recovery steam generators (HRSGs). The HRSGs, when operational, will replace the boilers for Units PFM1 and PFM 2. The CTs will initially be operated in simple cycle mode on the preliminary schedule identified in this application. During this period, Units PFM1 and PFM2 may also be operated. During the interconnection of the HRSGs steam supply with the steam turbines for Units PFM1 and PFM2, the boilers associated with Units PFM1 and PFM2 will be taken out of service. This will occur during 2001. At this time FPL will notify EPA of the retirement of Units PFM1 and PFM2.



Received by aach

October 28, 1998

Mr. Clair Fancy, P.E. State of Florida Department of Environmental Protection Division of Air Resources Management 2600 Blair Stone Road Tallahassee, FL 32399-2400

Re: FPL Fort Myers Plant

<u>Draft Air Construction Permit #0710002-004AC</u>

Dear Mr. Fancy:

This correspondence provides comments regarding the subject draft Air Construction Permit for the Fort Myers power plant, which was received by FPL on September 18, 1998.

Before providing comments, I would like to thank the Department, and particularly Al Linero for the timely response to our permit application. I look forward to working closely with the Department in the future in order to optimize the environmental aspects of the project.

Following are our comments to various Specific Conditions. Language requested to be deleted is stricken; suggested new language is in **boldface type**.

Specific Condition 9 <u>Turbine Capacity</u>: The maximum heat input rates, based on the lower heating value (LHV) of the fuel to each combustion turbine at <del>ambient</del> **compressor inlet** conditions of 59°F, 60% relative humidity, 100% load, and 14.7 psia shall not exceed 1,600 million Btu per hour, (mmBtu / hr). The maximum heat input rate will vary depending upon turbine inlet conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other <del>ambient</del> **compressor inlet** conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. Also see the rational for specific condition 18. [Design, Rule 62-210.200, F.A.C. (Definitions – Potential Emissions)]. **Move to Statement of Basis.** 

Rationale: In previous conversations with the Department and with EPA regarding periodic monitoring, I understand that the Department has agreed to remove heat input limitations from the body of air permits, and to insert them into the Statement of Basis (SOB). Accordingly, we request that change to be made here as well. Also, since inlet foggers will be used as part of this project, it is appropriate to reflect the "fogged" condition in the correction to ISO conditions. Using the compressor inlet temperature, rather than ambient, will accomplish this.

Specific Condition 10 Steam Boiler: Move to Statement of Basis.

Rationale: FPL and Black & Veatch have refined the design of the fuel gas heater from the steam boiler to six direct-fired heaters. The exact configuration could involve from 2 to 5 heaters, depending on the selected location; i.e., in the gasyard or adjacent to the combustion turbines. The combined heat input and emissions from six fuel gas heaters will not exceed that included in our initial application.

Specific Condition 18. Following are the emission limits determined for this project assuming full load. Values for NOx are corrected to  $15\%~0_2$ . These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are followed by the applicable specific conditions. [Applicant Requests, Rules 62-204.800(7)(b)(Subparts GG and Db), 62-210.200 (Definitions- Potential Emissions), F.A.C.].

Emission Unit	NOx	СО	VOC	PM / Visibility (% Opacity)	Technology and Comments
Combustion Turbines (each)	9ppm 68 lb / hour (30 day) 75 / 110 ppm (NSPS)	<del>12 ppm</del> 45 lb / hour	1.4 ppm 3 lb / hour	10	Dry Low NOx Combustors Natural Gas, Good Combustion
Gas Heater / Boiler	0.10 lb / mmBtu	0.15 lb / mmBtu		10	Dry Low NOx Burners

Rationale: The 68 lb/hour emission rate was the basis for the potential emissions of NOx for the repowering project in tons/year as provided in the permit application. It is unnecessary to regulate FPL for both concentration (ppm) and mass emissions since the mass emissions (of 68, 45 and 3 lb. / hour) provides the Department a limit on total emissions and assurance that PSD is not triggered.

#### Specific Condition 19 Nitrogen Oxides (NOx) Emissions:

- The concentration of NOx concentrations in the exhaust gas of each CT shall not exceed 9 ppmvd at 15% O2 68 lb. / hour on a 30-day rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). Based on CEMS data at the end of each operating day, a new 30-day average rate is calculated from the arithmetic average of all valid operating hourly emission rates during the previous 30 operating days. In addition, NOx emissions calculated as NO2 (at ISO conditions) shall exceed neither 9 ppm @15% O2 nor 65 lb. / hour to be demonstrated by stack test.
- When NOx monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate the specified average time.
- NOx emission limit from the gas heaters/boiler shall not exceed 0.10 mmBtu / hour to be demonstrated by stack test.

Rationale: See rationale for specific condition #18.

Specific Condition 21 <u>Carbon Monoxide (CO) Emissions</u>: The concentration of CO (@ 15% O2) in the exhaust gas shall not exceed 12 ppmvd as measured by EPA Method 10. CO emissions (at ISO conditions) shall not exceed 43 45 lb. / hr (per CT) to be demonstrated by **annual EPA Method 10** stack test.

Rationale: See rationale for specific condition #18.

Specific Condition 22 <u>Volatile Organic Compounds (VOC) Emissions</u>: The concentration of VOC in the exhaust gas shall not exceed <u>1.4 ppmvd as measured by EPA Methods 18 or 25A. VOC emissions (at ISO conditions) shall not exceed 2.9 3.0 lb. / hr (per CT) to be demonstrated by annual EPA Method 18 or 25A stack test. The VOC emissions shall be exclusive of background concentrations in the ambient air.</u>

Rationale: See rationale for specific condition # 18. In addition, background concentrations of VOC in the ambient air should be subtracted from the measured VOC in the exhaust stream.

Specific Condition 24 Excess Emissions – Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during startups. During cold startup to combined cycle operation, up to twelve hours of excess emissions are allowed. During startups of individual CTs, up to four hours of excess emissions are allowed. Cold startup is defined as a startup to combined cycle operation following a complete shutdown lasting at least 48 hours.

Rationale: FPL and our design-engineering firm, Black & Veatch, have identified a requirement for extended startup excess emission allowances during "cold" startups. Because of the unique configuration of the Fort Myers repowered plant, (i.e. 6 combustion turbines / HRSG's feeding a 430MW steam turbine, then a 160MW steam turbine, in series), FPL, Black & Veatch, Foster Wheeler and GE are concerned about the limitations of both the HRSGs and the 430MW steam turbine with respect to the "ramp rate" for both steam turbine and HRSG metal temperatures.

The suggested language allows FPL the flexibility to start up and operate the new facility and to gain operational experience with this new configuration. Furthermore, Rule 62-210.700(5) provides a basis for this flexibility: "Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest."

Specific Condition 31. <u>Compliance with CO emission limit</u>: An initial test for CO, shall be conducted concurrently with the initial NOx test, as required. The initial NOx and CO test results shall be the average of three valid <del>one-hour</del> runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual NOx RATA testing which is performed pursuant to 40 CFR 75.

Comment: The requirement for three, one-hour runs for the NOx test appears to reflect the requirements of EPA Method 7E rather than Method 20. Note that Method 20 is specified as the NOx test method in Specific Condition 28. Method 20 requires an  $O_2$ - $CO_2$  traverse, then the 8 points with the lowest  $\%O_2$  are sampled for only about 1 minute each (rather than 1 hour). Note that 40 CFR 60.335 requires Method 20 to be used; but Method 20 doesn't require 1-hour test runs. The same section of the CFR requires a NOx analyzer span of 0-300ppm; however FPL wishes to retain the right to use smaller spans, such as 0-250 or even 0-25 ppm, either of which are inherently more accurate than 0-300ppm.

Specific Condition 33 <u>Testing Procedures</u>: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average turbine Intel compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient compressor inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. turbine compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient compressor inlet temperature) and 105 percent of the value reached during the test 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 purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204.800 F.A.C..

Rationale: These combustion turbines will have inlet foggers which will lower the effective temperature "seen" by the combustion turbine compressor. It is therefore appropriate to use these values, rather than ambient values, for comparison with heat input.

Specific Condition 39 <u>Continuous Monitoring System</u>: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measur4e and record the nitrogen oxides emissions from each CT. Thirty day rolling average periods when NOx emissions (ppmvd @ 15% oxygen lb / hour) are above the standards, listed in Specific Condition No 18 and 19, shall be provided to the DEP Bureau of Air Monitoring and Mobile Sources pursuant to 40CFR75. The lb. / hour value shall be calculated by multiplying the lb. / mmBtu measured by the CEM by the heat input value as calculated pursuant to 40CFR 75, for each operating hour.

Rationale: For consistency with Specific Conditions 18 and 19, the lb. / hour value is the appropriate one to use in this instance. The additional sentence regarding the calculation of the lb. / hour value is for clarification.

FPL and Black & Veatch have recently identified the need to add a diesel-fired water pump to the site for the purpose of fire protection. This would be a backup pump to the normal fire protection system and would only be used in an emergency or for testing required by NFPA regulations (1-2 hrs / month). It is exempt from permitting since it qualifies for a categorical exemption under State Rule 62-210.300(3)(a)22. — Fire and Safety equipment. For the Department's information, the following emission rates and fuel consumption rates are planned for this piece of equipment:

Fuel consumption 19.7 gallons per hour VOC 170 grams per hour NOx 2850 grams per hour CO 1010 grams per hour SO2 250 grams per hour Particulate matter 80 grams per hour

I look forward to discussing these issues with your at your earliest convenience. Please do not hesitate to contact me at (561) 691-7058 if I can answer any questions.

Very truly yours,

Rich Piper

Repowering Licensing Manager Florida Power & Light Company

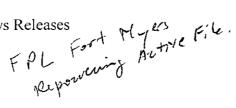
bcc:

W. Reichel PFM / PFM B. Burgess GPA / JB J. Gnecco CPM / JB P. Cunningham **HGSS** K. Kosky Golder Inc. M. Beery

Black & Veatch

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#### **NEWS RELEASES**

### FOSTER WHEELER SELECTED TO SUPPLY 12 HEAT RECOVERY STEAM GENERATORS FOR FLORIDA POWER & LIGHT REPOWERING PROJECTS

CLINTON, N.J., October 6, 1998-Foster Wheeler has been selected by Florida Power & Light Co. to design, manufacture, and erect twelve heat recovery steam generators (HRSGs) as part of its repowering program at the Ft. Myers and Sanford Generating Stations. The transaction is valued at approximately \$145 million.

The HRSGs to be supplied by Foster Wheeler will be coupled to new General Electric Frame 7FA combustion-turbine generators to convert waste heat exhaust gas into 407,070 lbs/hr of high pressure steam to power already-existing steam-turbine generators in these highly efficient, low emission combined-cycle power plants.

The HRSG units will be designed to operate at high pressures and temperatures (2400 psi and 1050°F) using Foster Wheeler's proven natural circulation technology, a design that is used throughout the power industry in a variety of steam generating applications.

The contract will be executed by Foster Wheeler Limited, located in St. Catharines, Ontario, Canada, and a leading supplier of heat recovery steam generators and other steam generating technology.

Foster Wheeler Limited is a subsidiary of Foster Wheeler Energy International, Inc., which is based in Clinton, New Jersey.

Foster Wheeler Energy International, Inc. designs, manufactures, and erects steam generators and auxiliary power generation equipment for electric power producers, public authorities, and industrial applications worldwide.

Foster Wheeler Corporation is a global company offering a broad range of design, engineering, construction, manufacturing, project development and management, research, plant operations and environmental services. The Corporation's headquarters are at Clinton, N.J. For more information about Foster Wheeler, visit our World-Wide Web site at www.fwc.com.

Contact Alastair Davie at 908-730-4444 for further information, or e-mail to alastair davie@fwc.com.

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# FPL plans to repower Fort Myers plant with gas pipeline

Monday, October 12, 1998

By REBECCA WAKEFIELD, Staff Writer



Roy Goss, left, and Scott Subbert prepare foundations to mount heat exchanges at the Florida Power & Light plant in Fort Myers last week. Subbert is a mechanic for mechanical maintenance at the plant and Goss is maintenance leader. Lisa Krantz/Staff

The Florida Power & Light Co. recently put the gas to its \$500 million plan to keep up with booming energy needs in Southwest Florida.

Oct. 1, FPL announced its contract with Florida Gas Transmission Company to build a natural gas pipeline from Tampa to the FPL plant in Fort Myers.

The gas company plans to run 100 miles of pipeline from existing facilities near Tampa, through Polk, Hardee, DeSoto, Charlotte and Lee counties to the plant.

FPL says it will triple the capacity of the 40-year-old power plant by combining jet engine technology with the plant's steam generators and by burning natural gas instead of oil. The repowered plant is expected to begin

continued..

construction next December and be fully operational by late 2001.

Florida Gas Transmission will submit its proposal for the route the underground gas pipeline will take to the Federal Energy Regulatory Commission Dec. 1, 1998. Construction is scheduled to begin in March 2000 and finish by the fall of 2000.

The Fort Myers plant is the first of three repowering projects to expand FPL's statewide generating system by 14 percent - about 2,500 additional megawatts - over the next 10 years.

FPL says the 540-megawatt capacity plant will be increased to about 1,400 megawatts to keep up with the demands of a region growing 40 percent faster than in the rest of its service territory. The move will also clean up the air around the plant, reducing pollution to a fraction of today's levels.

The repowering effort will not lower electric bills in the region because FPL bases its rates on the entire system, said Grover Whidden, spokesman for the Fort Myers plant. But the move toward efficiency and more power generation will hold back rising costs in the future, he said.

### Benefits of the project include:

- -- Significant reduction of air pollution from nitrogen oxide, sulfur dioxide, carbon monoxide and particulate matter. Particulate matter makes up the majority of the visible smoke coming from the stacks.
- -- An increased fuel efficiency of about 30 percent and a total plant operating efficiency near 90 percent, instead of the current 50 percent. Both will result in reduced need to borrow power from Florida's east coast through long-distance transmission lines. The region may still borrow more than half its power in peak times.
- -- Oil barges will no longer bring fuel up the Caloosahatchee River from Boca Grande, thus eliminating the danger of an oil spill. The oil storage terminal at Boca Grande will also be retired.
- -- The six new combustion turbines and heat recovery units will be built on the existing FPL site with no need for a land expansion. Also, the two 400-foot stacks will

### Naples News

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be replaced by six stacks at only half the height.

-- FPL plans to landscape the areas facing State Road 80 and the Caloosahatchee to make them more aesthetic.

-- FPL estimates it will pay more than nine times the tax revenue for Lee County - \$5 million - in 2002.

For months, FPL has been soliciting comments on the project and taking groups from community, business and environmental organizations on plant tours. The outreach effort has paid off in support from a variety of sources.

Karl Hollander, executive director of Lee County Alliance of the Arts, served on a citizen advisory panel created by FPL several months ago to address any local concerns about the repowering project.

Hollander supports the FPL project because of its environmental benefits and the potential to encourage growth in the area. And though he likes the idea of having more energy choices in the future, he expressed concern about possible impacts of some routes for the gas pipeline.

"I have no problem with FPL," Hollander said. "I don't know how the company bringing in the propane will do things."

FGT spokeswoman Linsey Hasenbank said the company plans to follow FPL's lead in getting input from the public on the project and considerations for the best route for the pipeline. The meetings with community members will begin sometime this month, she said.

"We would like to work with the community to minimize environmental and public impacts," she said." We will try to follow existing routes where possible."

Hasenbank said this pipeline will be designed solely for the plant, but if a market develops, the company will likely pursue expansion. The pipeline will be FGT's first foray into Southwest Florida, though company pipelines extend to Miami on the east coast.

The market is sure to develop, said Steve Tirey, president and CEO of the Chamber of Commerce of Southwest Florida. He pointed to Tampa-based utility TECO Peoples Gas, which recently announced plans to

extend its pipelines from Sarasota to Marco Island, as an example.

"I think there will be a tremendous economic impact (from the FPL project), and not only from the construction dollars and capital improvement," Tirey said. "There will be economic spinoffs. I think we'll look back at this as a pretty significant benefit for large energy users."

Tirey added that the availability of an alternative, economical energy source could convince more companies to relocate to the region.

"We'll also probably see some existing companies convert to gas as a secondary or primary source because it's cheaper in the long term," he said. "As we go further in time, it will trickle down to residential energy."

One reservation about the plant centers on the warm water discharge in the Orange River that attracts hundreds of manatees to the site each winter.

Michael Simonik, environmental policy director for The Conservancy of Southwest Florida, said he would like to see more studies on the effects of the discharge on the endangered mammals. Among his concerns: that large numbers of manatees coming up the Caloosahatchee River are coming into greater contact with motor boats than they normally would. Also, an outbreak of disease at the wrong time of year could wipe out the congregating manatees.

"If there is a time to stop (the discharges), it would be now when they are reworking the whole plant," he said.

Whidden said the plant has been discharging warm water for 40 years and the repowering effort will include a cooling tower to ensure a more consistent temperature year-round.

Another caveat to the repowering effort that Simonik largely supports for its many environmental benefits is FPL's cutbacks on energy conservation incentives, such as rebates for energy-efficient homes.

"We're supportive, but I do think FPL needs to work harder to get people to conserve," he said. "They are (more focused on) accommodating the growing power needs."

RECOLUNE 1998

RIPREGULATION

AIR REGULATION



October 9, 1998

Mr. Clair Fancy, P.E. State of Florida Department of Environmental Protection Division of Air Resources Management 2600 Blair Stone Road Tallahassee, FL 32399-2400

Re: FPL Fort Myers Plant Draft Air Construction Permit #0710002-004AC **Public Notice** 

Dear Mr. Fancy:

Enclosed please find the Affidavit of Publication for the Public Notice of Intent to Issue the Air Construction permit for the Fort Myers repowered facility. This notice appeared in the Fort Myers News Press on September 30, 1998.

Please do not hesitate to contact me at (561) 691-7058 if I you have any questions.

Very truly yours,

CC: 50

Rich Piper

Repowering Licensing Manager

Florida Power & Light Company

#### **NEWS-PRESS** Published every morning — Dally and Sunday Fort Myers, Florida **Affidavit of Publication**

STATE OF FLORIDA COUNTY OF LEE

Before the undersigned authority, personally appeared
Brenda Leighton
who on oath says that he/she is the
Legal Coordinator of the News-Press, a
daily newspaper, published at Fort Myers, in Lee County, Florida; that the
attached copy of advertisement, being a
display
in the matter of Notice of Intent to Issue
Air Construction Permit
in theCour
was published in said newspaper in the issues of
September 30, 1998
Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published a Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County; Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers is said Lee County, Florida, for a period of one year next preceding the first vehicles of the street of the said Lee County.
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MY COMMISSION # CC602535 EXPIRES

November 19, 2000

BONDED THRU TROY FAIN INSURANCE, INC.

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP FILE NO. 07 10002-004-AC
Florida Power & Light Fort Myers Plant
1500 Megawath Repowering Project
Lee County

The Department of Environmental Protection (Department) gives notice of its intent to Issue an air construction permit to Florido Power & Light Company (FPL). The permit is to install six combined cycle units to replace two [2] residual oil-fired seam generators of the Fort Myers Plant near Tice, Lee County, A Best Available Control Technology (BACT) determined by the Fort Myers Plant near Tice, Lee County, A Best Available Control Technology (BACT) determined by the Fort Myers Plant near Tice, Lee County, A Best Available Control Technology (BACT) determined by the Fort Myers Plant near Tice, Lee County, A Best Available Control Technology (BACT) determination was not required pursuant to Rule 62-212.400, FA.C. The applicant's name and address are Florida Power & Light, Fort Myers Plant, Post Office Box 430, Fort Myers, Florida 33905.

and address are Florida Power & Light, Fort Myers Plant, Post Othce Box 450, Fort Myers, Fronca 33703.

[Each unit is a nominal 170 Megawart General Electric MS7241FA 430; fred combustion turbine generator with an unfired beat recovery steam generator (HRSG) that will raise sufficient steam to produce approximately another 80 MW, via the existing steam-driven electrical generators. The boilers and the fall stacks associated with existing residual oil freed units (593 MW, total capacity) will be distincted. The project is in-effect a "gas repowering of existing fossil-fuel fired units. The project also includes a cooling flower for once through brackish water; a small boiler or heaters to heat the natural gas prior to use; and two relatively short stocks per unit for simple and combined (with HRSG) operation. it for simple and combined (with HRSG) operation.

Nitrogen Oxides (NO.) emissions will be controlled by Dry Low NO. (DUN-2.6) combustors capable of

achieving emissions of 9 parts per million (ppm) by volume at 15 percent oxygen. Emissions of carbon monoxide (CO) will be controlled to 12 ppm, while emissions of volatile organic compounds (VOC) will be less than 1.4 ppm. Emissions of sulfur diaxide (SOs), sulfuric acid mist (SAM), and particulate matter (PM/PMs) will be very low because of the switch to inherently clean pipeline quality natural gas. There will be no provisions for firing fuel oil.

Although a BACT determination was not required, the proven capabilities of the selected units and the limits

that FPL has accepted are more stringent than the requirements to-date for any combustion turbine project in Florida. There will be very substantial decreases in regulated air pollutants except for an insignificant increase in VOC emissions. The maximum potential annual emissions in tons per year are summarized below for

in VC emissions, the maximum potential annual emissions in tons per year are summarized below for comparison with recent annual emissions from Units 1 and 2 stated for retirement. \*

Pollutants

Wint 1/2 Emissions

After Repowering

Increase (decrease)

1294

1313

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The Department will issue the FINAL permit with the discholar conditions unless a response received in occordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuence action for a period of thirty (30), days from the date of publication of "public Notice of Intent to Issue Air Construction Permit." Written comments should be provided to the Department's Bureau of Air Regulation or 2200 Blair Stone Road, Mail Station \$5505, Tallahassee, FL 32399, 2400. Any written comments field shall be made available for public inspection if written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, growther Public Notice.

The Fort Myer's Repowering Project is not subject to review under Section 403,506 FS. (Power Plant String Act), because it provides for no expansion in steam generating capacity.

is filed pursuant to Sections 120 569 and 120.57 F.S. before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an.

administrative proceeding (hearing) under Sections 120.569 and 120.57 of the Florida Statutes. The petition must con the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 1835, Tallahasse, Florida, 32399-3000, Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent Petitions filed by any persons other than those entitled to written notice under Section 120 60(3) of the Florido Statues must be filed within fourteen days of publication of the public notice of within fourteen days of receipt of this notice of intent, whichever comes first. Under Section 120.60(3), however, any person who asked the Department for notice of agency action may file a partition within fourteen days of receipt of that notice, regardless of the date of publication. A partitioner shall mail a copy of the petition within the appropriate time period shall constitute a waiver of that person's right to request an administra rmination (hearing) under Sections 120.569 and 120.57 FS., 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 filling of a motion in iance with Rule 28-106.205 of the Florida Administrative Code. -

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action, (d) A statement of all disputed issues of terial 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; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106-301.

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

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:

Florida Department of Environmental Protection Bureau of Air Regulation
111 S Magnolia Drive, Suite 4

Tallahassee, Florida 32301 Telephone: (850) 488-1344 Fax: (850) 922-6979

Florida Department of Environmental Protection Fort Myers, Florida 33902-2549 Telephone: (941) 332-6975

Fax: (941) 332-6969

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111,F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-0114, for additional information.



## Department of Environmental Protection

Lawton Chiles Governor Virginia B. Wetherell Secretary

September 22, 1998

#### **CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. R. Douglas Neeley, Chief Air, Radiation Technology Branch US EPA Region IV 61 Forsyth Street Atlanta, GA 30303

Re: Custom Fuel Monitoring Schedule FPL Fort Myers Plant Repowering Project DEP File 0710002-004-AC

Dear Mr. Neeley:

Enclosed are copies of a construction permit (non-PSD) application and the Department's Intent to Issue Permit to repower residual fuel oil-fired Units 1 and 2 at the Florida Power & Light (FPL) Fort Myers Plant in Lee County. The boilers will be replaced with six highly efficient gas-fired combustion turbines and heat recovery steam generators. The project will reduce emissions of sulfur dioxide and nitrogen oxides by over 20,000 and 5000 tons per year respectively while increasing generating capacity from 600 to 1500 megawatts.

Please send your written comments on or approval of the applicant's proposed custom fuel monitoring schedule. The plan is based on the enclosed letter dated January 16, 1996 from Region V to Dayton Power and Light. The Subpart GG limit on SO<sub>2</sub> emissions is 150 ppmvd @ 15% O<sub>2</sub> or a fuel sulfur limit of 0.8% sulfur. Neither of these limits could conceivably be violated by the use of pipeline quality natural gas which has a maximum SO<sub>2</sub> emission rate of 0.0006 lb/MMBtu (40 CFR 75 Appendix D Section 2.3.1.4). The sulfur content of pipeline quality natural gas in Florida has been estimated at a maximum of 0.003 % sulfur. No fuel oil will be used. The requirement has been incorporated into the enclosed draft permit as Specific Condition 42.

Please comment on Specific Condition 29 which allows the use of the acid rain  $NO_X$  CEMS for demonstrating compliance as well as reporting excess emissions. The Subpart GG requirements for the water-to-fuel monitoring system do not apply because only combustion controls will be employed. Typically  $NO_X$  emissions will be less than 10 ppmvd @15% O2 which is less than one-tenth of the applicable Subpart GG limit based on the efficiency of the unit. A CEMS requirement is stricter and more accurate than any Subpart GG requirement for determining excess emissions.

The Department recommends your approval of the custom fuel monitoring schedule and these  $NO_X$  monitoring provisions. We also invite your comments on the Intent to Issue. If you have any questions on these matters please contact me at 850/921-9523.

Sincerely,

A. A. Linero, P.E., Administrator

**New Source Review Section** 

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Enclosures

the reverse side?	SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b. Print your name and address on the reverse of this form so that we card to you.  Attach this form to the front of the mailpiece, or on the back if spac permit. Write 'Return Receipt Requested' on the mailpiece below the article. The Return Receipt will show to whom the article was delivered an	e does not	I also wish to receive the following services (for an exita fee):  1.  Addressee's Address 2.  Restricted Delivery
DDRESS completed on	Mr. Brian Beak, Section Chief Air, Radiation Technology Branch Preconstruction/HAP Section U.S. EPA - Region IV 61 Forsyth Street Atlanta, GA 30303	4a. Article No. 2 3 4b. Service T Registere	Consult postmaster for fee.  Solution  Solutio
Is your RETURN ADI	5. Received By: (Print Name) Will of C. Signature: (Addressee or Agent)	7. Date of De	is Address (Only if requested

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