

Memorandum

Florida Department of Environmental Protection

TO: Trina L. Vielhauer

THRU: For A. A. Linero JK

FROM: Teresa Heron

DATE: July 11, 2003

SUBJECT: Peaking Mode of Operation for the Eight Combined Cycle Combustion Turbines.
FPL Sanford 2200 MW Project
DEP File No. 1270009-009-AC and PSD-FL-270C

Attached is the draft public notice package including the Intent to Issue and the Technical Evaluation and Preliminary Determination for the above facility.

The application is for a permit modification to allow peak operation mode up to 400 hours per year for each of the existing eight combined cycle turbines. Peaking is expected to increase short term NO_x emissions from 9 to 15 ppmvd for each turbine and 68 TPY for all eight turbines due to higher temperatures during this mode. However, due to the substantial emissions decrease of this pollutant during the permitting of the repowering project, this project will not result in a net increase of NO_x emissions or any other criteria pollutants.

We have determined that the project nets out of PSD for all pollutants because of the very substantial emissions reductions resulting from the 1999 repowering project at the site.

We recommend your approval of the attached Intent to Issue and the cover letter.

AAJ/th

Attachments

* Same as Ft. Myers'

P.E. CERTIFICATION STATEMENT

PERMITTEE

FPL Sanford Power Plant
950 South Highway 17/92
Debary, FL 32713

Draft Air Permit No. 1270009-009-AC
Project: Peaking Mode Operation
Emissions Units 005 - 012
Volusia County, Florida

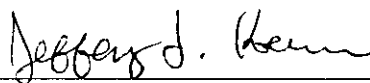
PROJECT DESCRIPTION

FPL requests the capability to operate their eight new combined cycle gas turbines (Units 4A-4D and 5A-5D) in a high temperature peaking mode of operation for up to 400 hours per year per unit. During this mode, a small amount of additional fuel is fired and the automatic gas turbine control system allows a slightly higher combustion temperature. Due to the higher temperatures, NOx emissions may increase from 9 to 15 ppmvd corrected to 15% oxygen. Only small increases of CO, PM, SO2, and VOC emissions are expected due to the firing of additional fuel. However, CO and VOC emissions may actually decrease due to the higher firing temperature. The eight combined cycle units have been constructed, tested, and are in operation. Only minimal work on the control system is necessary to implement the requested peaking mode of operation.

Based on the application, the project will result in the following potential emissions increases for all eight gas turbines combined: 0.2 TPY of CO; 68 TPY of NOx; 0.3 TPY of SO2; and negligible increases of PM, SAM, and VOC. These increases represent the differences between 400 hours of normal gas firing and 400 hours of gas firing while in the peaking mode. Only NOx emissions have the potential to exceed the PSD significant emission rate and trigger PSD preconstruction review. However, the original "re-powering" project required the shutdown of existing oil-fired Boilers 4 and 5, which resulted in large emissions decreases for all pollutants and a more than 7000 TPY decrease of NOx from the project. Boilers 4 and 5 were eventually retired in 2001 and 2002, which is well within the 5 year contemporaneous period of the current request. Therefore, there will be no net emissions increases from this project due to the contemporaneous emissions decreases from the previous re-powering project.

The draft permit modification contains performance and testing requirements related only to the peaking mode of operation. The NOx standard during peaking mode will be 15 ppmvd @ 15% oxygen based on a 24-hour block average. Compliance will be demonstrated by data collected from the existing NOx CEMS. This project is considered a permit modification because the original construction permit for the eight combined cycle units does not expire until December of 2003. The specific conditions are in addition to the original specific conditions in Permit PSD-FL-270. The permit expiration date is extended to July 1, 2004 to allow sufficient time to perform the work, conduct testing, and submit an application to revise the Title V air operation permit.

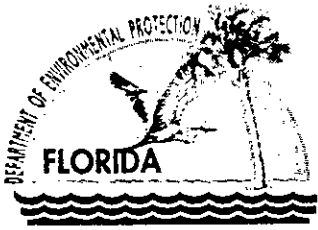
I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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, geological, and meteorological features).



Jeffery F. Koerner, P.E.
Registration Number: 49441

7-10-03

(Date)



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

July 11, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Roxane Kennedy, Plant General Manager
FPL Sanford Plant
950 South Highway 17-92
DeBary, Florida 32713

Re: DEP File No. 1270009-009-AC, PSD-FL-270C
FPL Sanford Plant – Peak Mode of Operation 2200 MW Combined Cycle Combustion Turbines

Dear Ms. Kennedy,

Enclosed is one copy of the Intent to Issue, Draft Air Construction Permit, and Technical Evaluation and Preliminary Determination for the referenced project at the FPL Sanford Plant, 950 South Highway 17-92, DeBary, Volusia County. The Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. A. Linero, P.E. Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please call Ms. Teresa Heron at 850/921-9529 or Mr. Linero 850/921-9523.

Sincerely,

Trina L. Vielhauer, Chief,
Bureau of Air Regulation

TLV/th

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

In the Matter of an
Application for Permit Modification by:

Ms. Roxane Kennedy, Plant General Manager
FPL Sanford Plant
950 South Highway 17-92
DeBary, Florida 32713

DEP File No. 1270009-009-AC and PSD-FL-270C
Peak Mode of Operation Project
2200 MW Combined Cycle Combustion Turbines
Volusia County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of DRAFT Permit Modification attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Florida Power & Light Company (FPL), applied on May 15, 2003 to the Department to modify and operate the eight (8) combustion turbines associated with Units 4A through 4D and Units 5A through 5D in Peak Firing Mode for up to 400 hours per year at the Sanford Plant near DeBary, Volusia County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit modification is required to perform proposed work.

The Department intends to issue this air construction permit modification based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., 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 Modification. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. 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 Department 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, Florida 32399-2400 (Telephone: 850/488-0114 / Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit modification. Failure to publish the notice and provide proof of publication may result in the denial of the permit modification pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit modification with the attached conditions unless a response received in accordance 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 modification issuance action for a period of 14 (fourteen) days from the date of publication of Public Notice of Intent to Issue Air Permit Modification. Written comments and requests for public meetings 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 a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing 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.

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

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

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

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

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

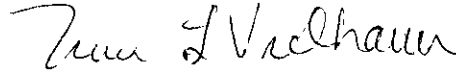
The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented

by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

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

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

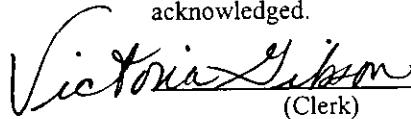
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, and the DRAFT permit modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7/15/03 to the person(s) listed:

Roxane Kennedy, FPL*
Len Kozlov, DEP CD
Gregg Worley, EPA
John Bunyak, NPS
Ken Kosky, P.E., Golder Associates

Clerk Stamp

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


(Clerk) July 15, 2003
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

DEP File No. 1270009-009-AC and PSD-FL-270C
Florida Power & Light Sanford Plant
Peak Mode of Operation for the 2200 Megawatt Combined Cycle Combustion Turbines
Volusia County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to Florida Power & Light Company (FPL). The original permit issued on September 4, 1999 allowed the installation of eight combined cycle units that replaced two (2) residual oil and gas fired steam generators at the at the Sanford Plant near DeBary, Volusia County. A Best Available Control Technology (BACT) determination was required for the original project (VOC emissions only) and is not required for this project pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are Florida Power & Light, Sanford Plant, 950 South Highway 17-92, DeBary, Florida 32713.

The permit modification is to allow peak operation mode up to 400 hours per year for each of the eight combined cycle combustion turbines. Peaking is expected to increase short term NOx emissions from 9 to 15 ppmvd for each turbine and 68 TPY for all eight turbines due to higher temperatures during this mode. However, due to the substantial emissions decrease of this pollutant during the permitting of the repowering project, this project will not result in a PSD significant net increase of NOx emissions or any other criteria pollutants. Therefore, an air quality impact analysis was not required.

The Department will issue the FINAL permit modification with the attached conditions unless a response received in accordance 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 modification issuance action for a period of fourteen (14) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit Modification." 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 a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

This Sanford Project is not subject to review under Section 403.506 F.S. (Power Plant Siting Act), because it provides for no expansion in steam generating capacity.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing 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 contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station # 35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), however, any person who asked the Department for

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

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

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

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

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
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555
Fax: 407/897-5963

The complete project file includes the application, technical evaluations, Draft Permit Modification, 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 850/488-0114, for additional information. The Department's technical evaluations and Draft Modification can be viewed at www.dep.state.fl.us/air/permitting.htm by clicking on Construction Permits.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Florida Power & Light Company

Sanford Power Plant
Peak Mode of Operation
Volusia County

DEP File No. 1270009-009-AC/PSD-FL-270C

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

July 11, 2003

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

Florida Power & Light Company
 Sanford Power Plant
 950 South Highway 17-92
 DeBary, Florida 32713

Authorized Representative: Roxane Kennedy, Plant General Manager

1.2 Reviewing and Process Schedule

05-15-03: Date of Receipt of Application
 05-15-03: Application completed
 07-11-03: Intent Issued

2. FACILITY INFORMATION

2.1 Facility Location

Refer to Figure 1 and 2. The Sanford Plant is located in the City of DeBary, Volusia County, on 1,700 acres, west of Highway 17-92 and approximately 3 miles northeast of Sanford. This site is approximately 130 kilometers from Chassahowitzka National Wilderness Area, a Class I PSD Area.

The UTM coordinates of this facility are Zone 17; 468.3 km E; 3,190.3 km N.

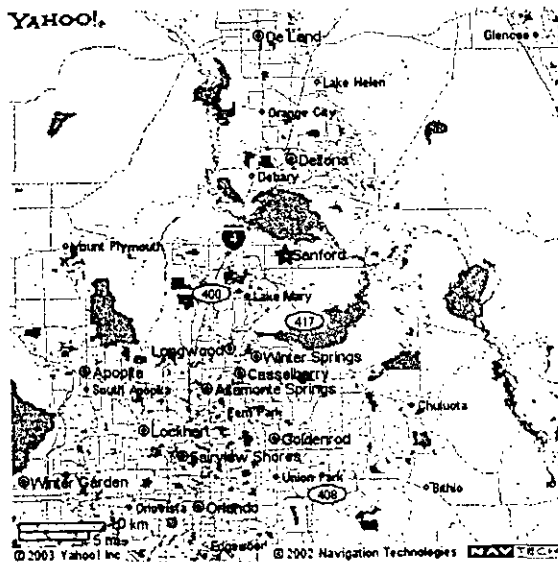


Figure 1 – Regional Location

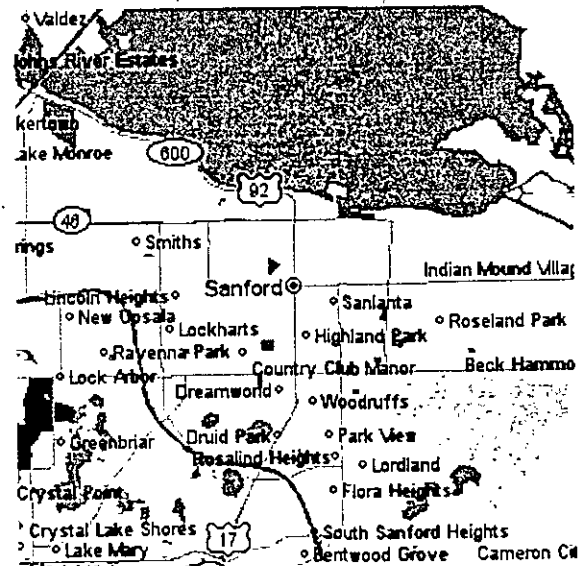


Figure 2 – Location of Plant

2.2 Standard Industrial Classification Codes (SIC)

Industry Group No.	49	Electric, Gas, and Sanitary Services
Industry No.	4911	Electric Services

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

2.3 Facility Category

The FPL Sanford generates electric power from eight natural gas/oil fired combined cycle combustion turbines (2200 MW) and a residual 156 MW fuel oil-fired and gas-fired steam unit (Unit 3). The new eight natural gas/oil fired combined cycle units replaced two residual fuel oil-fired units (Units 4 & 5) and are repowering the existing electrical generators associated with those units. The 1999 project increased the nominal capacity of the plant from 1028 MW to approximately 2356 MW. Figure 3 shows a similar project at Ft. Myers.

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY.

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a major facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). No review per the PSD rules and determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C., is required for this project.



Figure 3

View of Combined Cycle Combustion Gas Turbines at the Ft. Myers Plant

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

3. PROJECT DESCRIPTION

This permit addresses the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
ARMS No. 005-012	Power Generation	Eight (8) Combined Cycle Combustion Turbine-Generators with Unfired Heat Recovery Steam Generators

These units were permitted in 1999 as a result of the shutdown of boilers No. 4 and No. 5.

FPL proposes to operate the combustion turbines associated with Units 4A through 4D and 5A through 5D (ARMS Units 005-012) in peak firing mode for up to 400 hours per year. *Peaking* is simply running the unit at greater than design fuel input. *Peaking* allows gas turbine temperatures to drift higher than normal and results in increased in shaft-driven electrical power production. *Peaking* is expected to increase NO_x emissions from the gas turbine due to higher temperatures.

Emissions increases due to this project will occur. According to the application, estimated emissions for each turbine operating at capacity for 400 hours of peaking are 5.78 tons per year of CO, 1.02 TPY of SO₂, 1.8 TPY of PM/PM₁₀, 20.24 TPY of NO_x, and 0.56 TPY of VOC.

An evaluation of the HAP emissions, as presented by the applicant in the original 1999 application, indicates that emissions are less than 25 tons/year for all HAPs and less than 10 tons/yr for a single HAP. This project will not have any significant increase of these emissions.

The additional project information related to the combustor design, and control measures to minimize pollutant emissions from these units are given in the original permit 1270009-004-AC and Technical Evaluation and Preliminary Determination issued in 1999.

4. RULE APPLICABILITY

This facility is subject to applicable requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) including applicable portions of the Code of Federal Regulations 40 CFR part 60, Part 72, Part 73, Part 75 and Part 77 incorporated therein.

This facility is located in Volusia County, an area designated as attainment for all criteria pollutants in accordance with Rule 62-204.360, F.A.C. The proposed project is not subject to PSD review under Rule 62-212.400., F.A.C. for PM/PM₁₀, CO, SO₂, SAM and NO_x. The reason, as discussed below, is that after considering all emissions changes from other contemporaneous projects (including the 1999 repowering project), the net potential emission increases do not exceed the significant emission rates given in Table 62-212.400-2, F.A.C.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

5. AIR POLLUTION CONTROL TECHNOLOGY

5.1 Permit Limits

Permit Emissions Rates for Original Permit 1270009-004-AC and the Request for Peaking Mode of Operation

Emission Unit	NO _x	CO	VOC BACT	PM/Visibility (% Opacity)	Technology and Comments
Combustion Turbines	9 ppmvd (baseload gas) 15 ppmvd (peaking gas) 42 ppm - oil	12 ppmvd gas 22 ppmvd oil 9 ppmvd (peaking gas)	1.4 ppmvd gas 7 ppmvw oil	10 - gas 20 - oil	Dry Low NO _x Combustors Natural Gas, Good Combustion, Water Injection (oil), Low sulfur distillate oil

Note: Compliance with the NO_x standard shall be based on CEMS data.

Standard operation: When burning gas, 30-days average time for an emission rate of 9 ppmvd NO_x @ 15% O₂.
When burning oil, 24-hr average time for an emission rate of 42 ppmvd NO_x @ 15% O₂.

Peaking Operation: When burning gas, 24-hr block average for an emission rate of 15 ppmvd NO_x @ 15% O₂.
Peaking mode of operation shall be excluded from compliance with the 30-day rolling average standard rate of 9 ppmvd NO_x @ 15% O₂ for standard gas firing.

6. SOURCE IMPACT ANALYSIS

6.1 Emissions

The proposed combustion turbines in the peak mode will primarily emit particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon monoxide, and sulfuric acid mist. The applicant's proposed annual emissions for criteria pollutants are summarized in the Table below and form the basis of the source impact review.

6.2 Emission Summary and Contemporaneous Emission Evaluation

The proposed emission increases due to operation in the peak mode netted out of PSD review pursuant to Rule 62.212.400(2) (e) F.A.C., Net Emissions Increases.

In 1999, the Department issued a PSD construction permit for the 2200 MW repowering project. The project was subject to PSD review and a BACT determination for only VOC emissions. The potential emissions from this project are: PM/PM₁₀ 387/374 TPY; SAM 423 TPY; SO₂ 279 TPY; NO_x 2745 TPY; CO 1719 TPY; and VOC 124 TPY.

In 2001 and 2002, existing Boilers 4 and 5 were permanently retired. The project for peaking mode operation is scheduled for completion in 2003. The emissions increases from the peaking mode project is contemporaneous with the emissions decreases from retiring Boilers 4 and 5.

Under the PSD regulations, Rule 62-212.400 (2)(e), F.A.C., these projects are considered contemporaneous. Therefore, since the decrease from the repowering project is so large, the contemporaneous emissions increases from the proposed project are still under the PSD significant threshold level. The contemporaneous emissions decreases for this facility as a result of the operation in peak mode are summarized as follows:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

CONTEMPORANEOUS CREDITABLE CHANGES (TPY)

Pollutant	Past Actual ^(a) Emissions (Units 4 and 5)	Past Changes ^(b) Emissions (Repowered)	Future Changes ^(c) Emissions (Peak Mode)	Total Changes ^(d) Increase (decrease)	PSD Significance	PSD Review?
PM/PM ₁₀	-538	374	Negligible	(164)	25/15	No
SAM	-1,276	42.3	Negligible	(1,234)	7	No
SO ₂	-28,729	279	0.32	(28,450)	40	No
NO _x	-9,984	2,757	68	(7,159)	40	No
VOC	-67	124	0.032	57 ^(e)	40	No
CO	-2,906	1,719	0.16	(1,188)	100	No

Notes:

(a) Decreases from shutdown of Boilers 4 and 5

(b) Past Emissions Increases: Repowering Project (1999).

(c) Future Emissions Increase: Peak Mode Operation for the eight (8) Combined Cycle Combustion Gas Turbines (this represents the difference in potential emissions between normal gas firing and peaking).

(d) Total Changes: Contemporaneous Emissions Increases from both projects 1999-2003.

(e) This facility went through PSD review and BACT determination for VOC in 1999 during the permitting of the 2200 MW Repowering project. The increase of VOC emissions from the peak mode operation is 0.032 TPY.

Emissions are calculated at a turbine inlet temperature of 59° F.

6.3 Air Quality Analysis

The proposed project (when considering contemporaneous changes) will not result in the net increase of emissions of any pollutants in excess of the PSD significant emission rates. Therefore, an analysis of the air quality impact from proposed project is not required.

7. CONCLUSION

Based on the foregoing technical evaluation of the application and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations.

Teresa Heron, Review Engineer

Jeff Koerner, P.E.

New Source Review Section

Bureau of Air Regulation

PERMITTEE:

Florida Power & Light Company
Sanford Power Plant
950 South Highway 17-92
DeBary, Florida 32713

Permit No.	1270009-009-AC (PSD-FL-270C)
Project:	2200 MW Repowering Project
SIC No.	4911
Expires:	July 1, 2004

Authorized Representative:

Roxane Kennedy
Plant General Manager

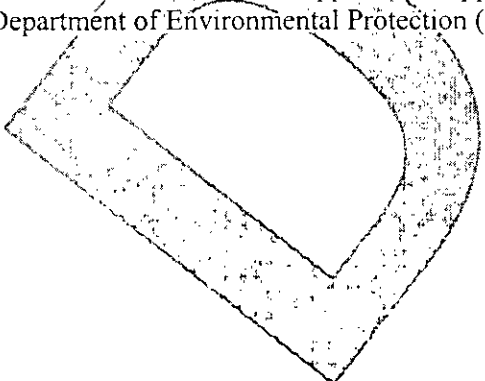
PROJECT AND LOCATION:

This permit modification authorizes peak operation mode for up to 400 hours per year for each of the existing eight combined cycle combustion turbines that comprise the 2200 MW repowering project. The eight combined cycle units have been constructed, tested, and are in operation. Each unit is a 170 megawatt General Electric MS7241FA gas-fired combustion turbine-generator with an unfired heat recovery steam generator (HRSG) that raises sufficient steam to produce another 80 MW via the existing steam-driven electrical generators.

This facility is located at 950 South Highway 17-92, DeBary, Volusia County. UTM coordinates are: Zone 17; 468.3 km E and 3,190.3 km N.

STATEMENT OF BASIS:

This construction permit is issued 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 above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).



Joseph Kahn, Acting Director
Division of Air Resources
Management

**AIR CONSTRUCTION PERMIT MODIFICATION 1270009-009-AC AND PSD-FL-270C
SPECIFIC CONDITIONS**

47. This permit modification (No.1270009-009-AC/PSD-FL-270C) regulates emissions during high temperature peaking mode operation and modifies original Permit No.1270009-004-AC/PSD-FL-270 issued on 9/14/99.
48. The provisions of the original air construction permit No.1270009-004-AC/PSD-FL-270 issued on 9/14/99, the administrative correction (No.1270009-004-AC/PSD-FL-270A) issued on 5/2/00 and the authorization for excess emissions following a rotor blade change-out (No.1270009-004-AC/PSD-FL-270B) issued on 3/18/03, remain as originally issued except for these additional new specific conditions.
49. Each gas turbine may operate in a high-temperature peaking mode when firing natural gas to generate additional direct, shaft-driven electrical power to respond to peak demands. During any consecutive 12 months, each combined cycle gas turbine shall operate in this peaking mode for no more than 400 hours of operation. The maximum heat input rate to each gas turbine is 1838 MMBtu per hour in peak mode operation (based on a compressor inlet air temperature of 59° F, the lower heating value (LHV) of natural gas, and 100% load). [Applicant Request, Rules 62-210.200 (Definitions-Potential Emissions), and 62-4.070(3), F.A.C.].

50. Peaking Mode Operation Limits:

The combined cycle gas turbines are subject to the following emission limits during peaking mode operation. Emissions limits are corrected to 15% O₂.

Emission Unit	NO _x	CO	VOC	PM/Visibility (% Opacity)	Technology and Comments
ARMS 005-012					
Combustion Turbines (each)	15 ppmvd (24-hr block avg) 102 lb/hr	9 ppmvd 29 lb/hr	1.4 ppmvd 3 lb/hr	10	Dry Low NO _x Combustors Natural Gas, Good Combustion

Averaging Time: A 24-hour block shall begin at midnight of each operating day and shall be calculated from 24 consecutive hourly average emission rate values. If a unit operates less than 24 hours during the block, the 24-hour block average shall be the average of available valid hourly average emission rate values for the 24-hour block. For purposes of determining compliance with the 24-hour CEMS standards, missing (or excluded) data shall not be substituted. Instead, the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. CEMS data collected during peaking mode operation shall be excluded from the demonstration of compliance with the NO_x standards during normal gas firing.

[Applicant Request, Rules 62-210.200 (Definitions-Potential Emissions), and 62-4.070(3), F.A.C.].

51. **Compliance Procedures:** Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate at which each unit will be operated, but not later than 180 days following initial operation of the unit in the *peaking* mode, by using the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

**AIR CONSTRUCTION PERMIT MODIFICATION 1270009-009-AC AND PSD-FL-270C
SPECIFIC CONDITIONS**

EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".

EPA Reference Method 7, "Determination of Nitrogen Oxides Emissions from Stationary Sources".

Compliance for each pollutant after the initial tests shall be the same as outlined in the original permit 0710002-004-AC issued on 11/25/98.

[Application; Rules 62-210.200(PTE) and 62-4.070 (3) F.A.C.]

52. **Title V Permit:** This permit authorizes modification of the emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. 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. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
53. **Expiration Date:** The expiration date of original permit No. 1270009-004-AC/PSD-FL-270 is extended from December 31, 2003 to July 1, 2004.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> 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. 	<p>A. Received by (Please Print Clearly) DALE G. DYKES B. Date of Delivery 7-18-03</p>
<p>1. Article Addressed to:</p> <p>Ms. Roxane Kennedy, Plant General Manager FPL Sanford Plant 950 South Highway 17-92 DeBary, FL 32713</p>	<p>C. Signature <i>X Dale Dykes</i> <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below</p>
<p>2. Article Identification Number: 01 7001 0320 0001 3692 5580</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789</p>	

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 City, State, ZIP+4
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