

April 30, 1999

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Dear Mr. Linero:

Re: Intercession City Inlet Fogging - Proof of Publication

I have enclosed the proof of publication of the Public Notice of Intent to Issue Air Construction Permit Modification for the inlet fogging project at Florida Power Corporation's Intercession City facility.

Please contact me at (727) 826-4334 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Michael Kennedy".

J. Michael Kennedy, Q.E.P.
Manager, Air Programs

cc: Al Linero, BAC - File
CD

RECEIVED

MAY 03 1999

BUREAU OF
AIR REGULATION

PROOF OF PUBLICATION

**STATE OF FLORIDA,
COUNTY OF OSCEOLA**

Before me, the undersigned authority, personally appeared Dan L. Autrey, who on oath says that he is General Manager of the Osceola News-Gazette, a twice weekly newspaper published at Kissimmee, in Osceola County, Florida; that the attached copy of the advertisement was published weekly in the regular and entire edition of said newspaper in the issues of:

..... *April* *10,* *1999*

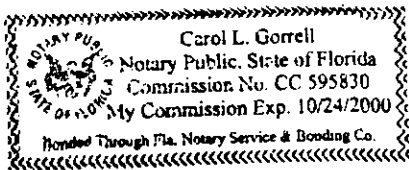
Affiant further says that the Osceola News-Gazette is a newspaper published in Kissimmee, in said Osceola County, Florida, and that the said newspaper has heretofore been continuously published in said Osceola County, Florida, each week and has been entered as periodicals postage matter at the post office in Kissimmee, in said Osceola County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Dan L. Autrey

Sworn to and subscribed before me by Dan L. Autrey, who is personally known to me, this . . . *10* . . . day of

..... *April* 19 *99*

Carol L. Gorrell
Carol L. Gorrell
(N.P. Seal)



**LEGAL
AD
DEADLINE
IS
FRIDAY
at
5:00 PM**

PROOF OF PUBLICATION

FROM

Osceola News-Gazette

**Kissimmee, Florida
OSCEOLA COUNTY**

In the Matter of

*Public Notice of Intent To
Issue Air Construction
Permit Modification*

Filed day of 19
First Publication . . . *April 10* . . . 19*99* . . .
Last Publication . . *April 10* . . . 19*99* . . .

**Make Remittance to Osceola News-Gazette
Kissimmee, Florida**

You Can
UNLOCK
YOUR MONEY'S POTENTIAL

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0970014-002-AC (PSD-FL-180B)
Florida Power Corporation Intercession City Plant
Units 7-10 Inlet Fogger Project
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to Florida Power Corporation (FPC). The permit is to install foggers at the compressor inlets of four 93-megawatt natural gas and No. 2 fuel oil-fired General Electric PG7111EA combustion turbine-electrical generators at the Intercession City Plant in Osceola County. A Best Available Control Technology (BACT) determination was not required pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are Florida Power Corporation, Post Office Box 14042, MAC BB1A, St. Petersburg, Florida 33733.

These units normally achieve their maximum rated output on cold days because the greater compressor inlet density allows greater throughput in the rotor or expansion section of the combustion turbine. The maximum power output is lower on hot days because of the lower compressor inlet density. The foggers increase hot-day power output by approximately 4-6 MW through evaporative cooling of the compressor inlet air although maximum output overall temperatures will remain 93 MW or below. The foggers provide no benefit on very humid or cold days and will not be used under those conditions. The result is that maximum hourly air pollution emissions will not increase although actual annual emissions will increase within their permitted limits because more fuel will be used on hot, relatively dry days.

Although the number of days during which the foggers can economically operate probably limits emissions increases to levels below significance for the purposes of PSD applicability, FPC proposes enforceable conditions to insure non-applicability. FPC asserts and the Department accepts that the modification will not cause any meaningful change in the hours of operation of these simple cycle peaking units. They are already limited to 3390 hours of operation per unit. The maximum increase in annual emissions caused by project in tons per year is summarized below along with the PSD-significant levels.

Pollutants	Annual Emissions Increase	PSD Significant Levels
PM/PM ₁₀	3	25/15
SAM	3	7
SO _x	40	40
NO _x	39	40
VOC	1	40
CO	11	100

An air quality impact analysis was not required or conducted. No significant impacts are expected to occur as a result of this project. It will not cause or contribute to a violation of any ambient air quality standard or increment.

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 issuance action for a period of thirty (30) 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 and require, if applicable, another Public Notice.

The Department will issue the permit 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 (14) 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 (14) 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, 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 29-106.301.

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:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-0114
Fax: 850/922-6979

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 evaluation, 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.



Date: 3/15/99

To: AI Liners, DEP BAR

FAX #: (850) 922-6979

Phone #: (850) 488-1344

From: Scott Cohen

FAX #: (727) 826-4216

Phone #: (727) 826-4258

9 Total number of pages including cover page.

Please notify _____ at (727) 826 - _____ for any problems concerning the receipt of this FAX.

Comments:

As we discussed, please feel free to call
Mike or me if you have any questions.
Scott

B

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0970014-002-AC (PSD-FL-180B)

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Units 7-10 Inlet Fogger Project
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to Florida Power Corporation (FPC). The permit is to install foggers at the compressor inlets of four 93-megawatt natural gas and No. 2 fuel oil-fired General Electric PG7111EA combustion turbine-electrical generators at the Intercession City Plant in Osceola County. A Best Available Control Technology (BACT) determination was not required pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are Florida Power Corporation, Post Office Box 14042, MAC BB1A, St. Petersburg, Florida 33733.

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Although the number of days during which the foggers can economically operate probably limits emissions increases to levels below significance for the purposes of PSD applicability, FPC proposes enforceable conditions to insure non-applicability. FPC asserts and the Department accepts that the modification will not cause any meaningful change in the hours of operation of these simple cycle peaking units. They are already limited to 3390 hours of operation per unit. The maximum increase in annual emissions caused by project in tons per year is summarized below along with the PSD-significant levels.

<u>Pollutants</u>	<u>Annual Emission Increase</u>	<u>PSD Significant Levels</u>
PM/PM ₁₀	3	25/15
SAM	3	7
SO ₂	40 <i>39.9</i>	40
NO _x	39	40
VOC	1	40
CO	11	100

the equivalent of (on average of)

An air quality impact analysis was not required or conducted. No significant impacts are expected to occur as a result of this project. It will not cause or contribute to a violation of any ambient air quality standard or increment.

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 issuance action for a period of thirty (30) 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, Mall 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 and require, if applicable, another Public Notice.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. Applicant

Florida Power Corporation
3201 34th Street South
St. Petersburg, Florida 33711

Authorized Representative: W. Jeffrey Pardue, CEP

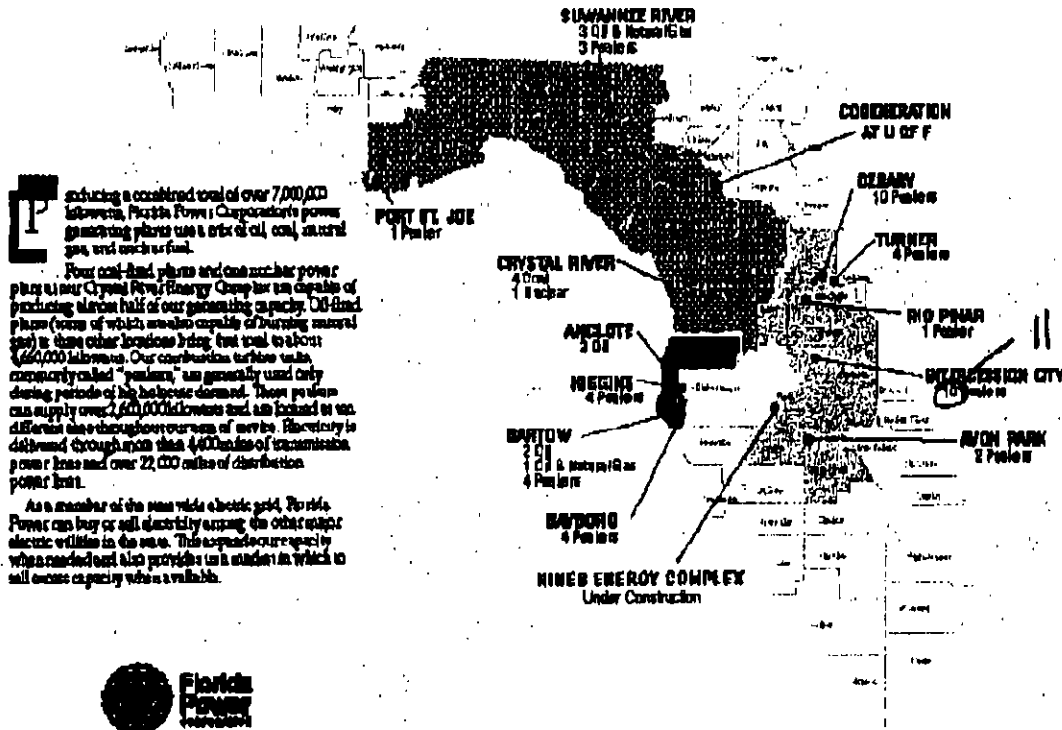
2. Source Name and Location

Intercession City Plant
Units P7, P8, P9, P10
Intercession City, Osceola County

UTM Coordinates: Zone 17, 446.3 km East and 3126 km North

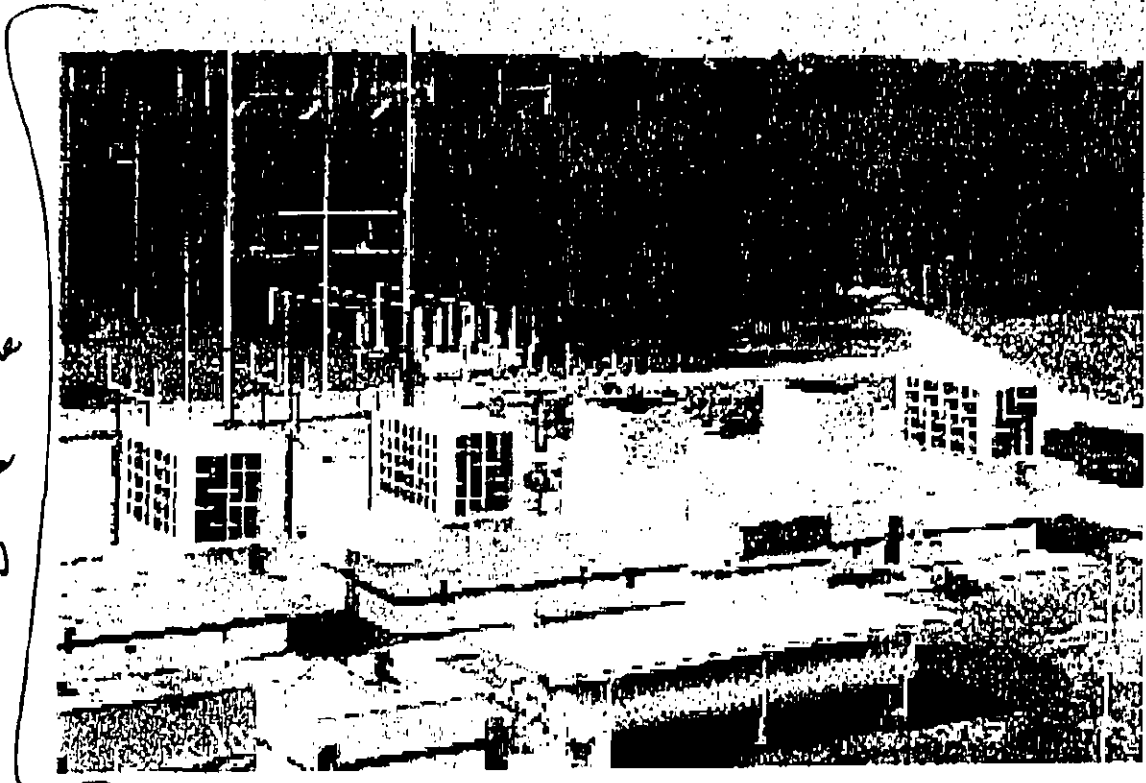
The location of the Intercession City Plant within the FPC system is shown below followed by a photograph of the site downloaded from the FPC website:

Power Production Facilities



TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

This is a picture of our Suwannee facility



3. Source Description

The Florida Power Corporation (FPC) Intercession City Plant consists of ^{eleven} ~~ten~~ combustion turbine peaking units. Units Nos. P7, P8, P9, and P10 (designated collectively as Emission Unit 002) are each 92.9 megawatt simple cycle General Electric PG7111EA combustion turbine-electrical generators. The units are fired with pipeline natural gas or No. 2 fuel oil containing 0.2 percent (%) or less sulfur. Annual hours of operation per unit are limited to 3,390 or less based on a sliding scale related to the fuel sulfur content. Control measures and equipment consist of firing clean fuels, good combustion practices, and wet injection.

(the equivalent of)

4. Current Permit and Major Regulatory Program Status

Construction of Units P7-P10 was authorized by the Department's Prevention of Significant Deterioration (PSD) Permit No. PSD-FL-180 and Air Construction Permit AC49-203114 issued in October 1993. Two other larger units were also authorized but only one was constructed. The ~~four~~ ^{five} units along with six other units at the plant are operated under Title V Air Operation Permit No. 0970014-001-AV issued in January 1998.

The initial construction of Units P7-P10 (and P11) was authorized pursuant to the Department's Preconstruction Review and Permitting requirements in Rules 62-210 and 62-212, F.A.C. The units were also reviewed in accordance with the New Source Performance Standard (NSPS) Subpart GG - Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800, F.A.C.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

5. Permit Modification Request

On February 24, 1998 the Department received a request from FPC for modification of its permits to install inlet foggers at the compressor inlets of Units P7-P10. These units normally achieve their maximum rated output on cold days because the greater compressor inlet air density allows greater throughput in the rotor or expansion section of the combustion turbine. The maximum power output is lower on hot days because of the lower compressor inlet density. The foggers increase hot-day power output by approximately 4-6 MW through evaporative cooling of the compressor inlet air although maximum output over all temperatures will remain 93 MW or below. The foggers provide little or no benefit on humid or cold days and will not be used under those conditions.

Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology.

6. Emissions Increases Due to Modification/Method of Operation

Because the main components of the units, including the compressors, combustors, rotors, fuel system, etc., will not be modified, it is arguable that the inlet foggers are not physical modification of the units. However the foggers are physical pieces of equipment whose addition and use can increase emissions on hot or dry days. The use of the foggers can also be considered a change in method of operation of the inlet "air conditioning system" that is already used to filter incoming air.

FPC estimated the maximum emissions increases by using the heat input increase associated with a 20 degree F decrease in compressor inlet temperature. Using the heat input curve, a 20-degree F temperature decrease results in an increase in heat input of 60 mmBtu per hour. This value is multiplied by the emission rate in lb/mmBtu to obtain hourly emissions increases. The results are summarized below together with annual emission increase estimates, based on 1,750 hours of operation per fogger per year. The estimates are based on fuel oil firing and would be substantially less when firing natural gas.

the equivalent of

TOTAL EMISSIONS INCREASES DUE TO USE OF INLET FOGGERS AT FOUR UNITS

Pollutant	Emission Rate lb/mmBtu	Emission Increase lb/hr	Annual Increase tons/yr	PSD Threshold tons/yr
NO _x	See Curve	11	39	40
PM/PM ₁₀	0.015	0.9	3	25/15
CO	0.05	3	11	100
VOC	0.004	0.2	1	40
SO ₂	0.19	11.4	1039.9	40
SAM	0.016	1	3	① 7.5?

The emissions increases calculated are the direct result from the modification or change in method of operation. These assume that the ability to achieve greater power output when the foggers are used does not result in the increased usage of the peaking units. The rationale is discussed below.

7. Evaluation of PSD Applicability

As a major source, a modification or change in method of operation of Units P7-P10 resulting in significant net emissions increases is subject to PSD review. Significant net emissions increase is defined in Rule 62-212.400, F.A.C as follows:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Actual hours of operation since the start of operations are as follows:

Unit/Year	Annual Operating Hours 1993 - 1998					
	1993	1994	1995	1996	1997	1998
P-7	193	873	649	1125	1996	1927
P-8	222	724	562	1269	1974	1796
P-9	68	697	715	1177	2031	1981
P-10	155	579	512	1186	1893	2019

There has been a steady increase in annual hours of operation since these units were installed in 1993. During 1997 and 1998, these units were each utilized between 1,796 and 2031 hours per year or more than half of the 3,390 permitted hours of operation per unit per year.

Although recent hours of operation are well below the permitted limits, they are actually fairly high compared with the typically low levels of operation characteristic of peaking units. Among the reasons for the relatively high levels are the prolonged shutdown of the baseloaded Crystal River Nuclear Unit 3 in 1997, the very hot summer of 1998, and the recognized low electrical power reserve margin in the State.

If these peaking units were being entirely replaced by larger units, it would be clear that they have not begun normal operations. In such a case, a comparison of future to past actual emissions would be based on a comparison of potential emissions to past actual emissions. Such a comparison would undoubtedly result in a determination that PSD is applicable unless the company took an extreme limitation in hours of operation.

If a like-kind replacement was being made, the same comparison would also result in a determination that PSD is applicable. That particular case was addressed for the purposes of comparison to the specific case addressed in the Puerto Rican Cement Decision. This is the watershed Federal Circuit Court of Appeals decision that upheld the past actual-to-potential emission comparison applicable to (at least) modernization projects. The comments of interest for the purposes of the present review are as follows:

"One can imagine circumstances that might test the reasonableness of EPA's regulation. An electricity company, for example, might wish to replace a peak load generator -- one that operates only a few days per year -- with a new peak load generator that the firm could, but almost certainly will not, operate every day. And, uncertainties about the precise shape of future electricity peak demand might make the firm hesitate to promise EPA it will never increase actual emissions (particularly since EPA insists, as a condition of accepting the promise and issuing the NAD, that the firm also promise not to apply for permission for an actual increase under the PSD review process). Whatever the arguments about the "irrationality" of EPA's interpretation in such circumstances, however, those circumstances are not present here. The Company is not interested in peak load capacity; it operated its old kilns at low levels in the past; its new, more efficient kiln might give it the economic ability to increase production; consequently, EPA could plausibly fear an increase in actual emissions were it to provide the NAD. Thus, this seems the very type of case for which the regulations quoted above were written. We can find nothing arbitrary or irrational about EPA applying those regulations to the Company's proposal."

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The FPC inlet fogger project is yet another step removed from a modernization project than the like-kind replacement example. The units will not be replaced at all. The modification and its effects can be isolated and directly estimated. The Department believes that the peaking units have begun normal operation. The addition of the inlet foggers will not change that fact or cause an increase in hours of operation. The modification itself (i.e. installation and operation of the foggers), however, has not yet begun normal operation and its future actual emissions based on potential to emit should be initially estimated assuming usage of the units at full capacity during the permitted 3,390 hours per unit per year.

The number of days during which the foggers can ^{the equivalent of} economically operate probably limits actual emissions increases to levels below significance for the purposes of PSD applicability. However, FPC proposes to limit operation of the foggers to 1,750 hours per unit per year. This value is approximately equal to the recent historical hours of operation for the four peaking units. It is also a clear indication that compressor air inlet cooling will not cause the units to operate all of the permitted hours. Emissions will increase under these limitations (as previously tabulated) by levels less than the significant emissions rates. The Department concludes, therefore that PSD does not apply to this project. *average of*

8. Proposed Addition of New Conditions to Permit PSD-FL-180

The construction permit has expired for the Intercession City Project to construct Units P7 through P11. The Department will re-issue the permit incorporating all other previously approved revisions and modifications to-date and will add a further condition authorizing installation and operation of the inlet foggers.

The new condition applicable to the inlet foggers proposed for Units P7 through P10 are shown in the draft re-issued and modified permit. It limits operation of the inlet foggers to 1,750 hours per unit per year. *the equivalent of*

9. Conclusions

The changes authorized by this permit modification will not cause increases in hours of operation and will not result in significant net emissions increases. The project will not increase the maximum short-term emission rates as these are already achieved under natural conditions of low ambient temperatures without the use of the foggers.

The Department concludes that PSD is not applicable to this project. The changes will not cause a significant impact or cause or contribute to a violation of any ambient air quality standard or PSD increment.

The Department's conclusion does not set a precedent for projects implemented at any facilities other than simple cycle peaking units. It does not set precedents related to any physical changes within the compressors, combustors, rotors, or other key components at such units. The application and determination of the Department's rules does not constitute an interpretation of the EPA rules under 40CFR52.21, Prevention of Significant Deterioration or 40CFR60, New Source Performance Standards.

PERMITTEE:

Florida Power Corporation
 Post Office Box 14042 MAC BB1A
 St. Petersburg, Florida 33733

DEP File No.	0970014-002-AC
Permit No.	PSD-FL-180B
Project	Peaking Unit Nos. 7-11
SIC No.	4911
Expires:	December 31, 1999

Authorized Representative:

W. Jeffrey Pardue, CEP
 Director, Environmental Services

PROJECT AND LOCATION:

Re-issued and modified permit for the construction of five simple cycle combustion turbine-electrical generators (Peaking Units Nos. 7-11). This action also provides for installation of inlet foggers on the four 92.9 megawatt simple cycle General Electric PG7111EA combustion turbine-electrical generators (Peaking Units 7-10), collectively designated as Emission Unit No. 002. This permit includes a 171 MW Siemens V84.3 combustion turbine-electrical generator (Peaking Unit 11) designated as Emission Unit 003 that is unaffected by this action.

The units are located at the FPC Intercession City Plant, 6525 Osceola Polk County Line Road, Intercession City, Osceola County. Santa Rosa Energy Center and will be located within the boundary of the Sterling Fiber Chemical Plant in Pace, Santa Rosa, County.

UTM coordinates are: Zone 17; 446.3 km E and 3126 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).

ATTACHED APPENDICES MADE A PART OF THIS PERMIT:

Appendix GC	Construction Permit General Conditions
Appendix SC	Specific Conditions

Howard L. Rhodes, Director
 Division of Air Resources
 Management

2 don't think we've ever used steam?

APPENDIX SC
SPECIFIC CONDITIONS

1. This permit supersedes permit AC49-203114 (PSD-FL-180), dated August 17, 1992 to install six simple cycle combustion turbine-electrical generators and its revisions dated:
 - October 6, 1993 – Test and Compliance Methods. ~~Steam in lieu of Water Injection~~
 - November 15, 1993 – Fuel Oil No. 2 in lieu of F, Hg, Pb, As, and Be Limits
 - July 15, 1994 – Substitute one 171 MW Siemens V84.3 for two 185.5 MW GE 7FA
 - September 21, 1994 – Manufacturer's Heat Input to Ambient Temperature Curve
 - January 20, 1995 – Compliance Testing Requirements
 - August 10, 1995 – Natural Gas Use
 - December 15, 1997 – NSPS Custom Fuel Monitoring Schedule
2. The provisions of the air construction permit AC49-203114 (PSD-FL-180), dated August 17, 1992 and the revisions to that permit, attached and listed above, are incorporated into this air construction permit.
3. Inlet foggers may be installed at the compressor inlet to each of the four simple cycle General Electric PG7111EA combustion turbine-electric generators. The four foggers may operate up to 7,000 hours per year in aggregate (average 1750 hours per unit per year).