

Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

May 1, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William Reichel, General Manager
FPL Fort Myers Plant
Post Office Box 430
Fort Myers, Florida 33905

Re: FPL Fort Myers Repowering Project
Steam Blow Operation
DEP File No. 0710002-008-AC

Dear Mr. Reichel:

Enclosed is one copy of the Intent to Issue and Draft Air Construction Permit Modification for the referenced project at the FPL Fort Myers Plant, north of State Road 80, near Tice, Lee County. The Department's Intent to Issue Air Modification Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" must be published one time only, as soon as possible, in the legal advertising section of a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time 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 A. 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.

Sincerely,

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

CHF/th

Enclosures

"More Protection, Less Process"

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<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): _____ B. Date of Delivery _____</p> <p>C. Signature: <i>J. Adams</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>
<p>Article Addressed to: <i>William Reichel, Gen. Mgr.</i> <i>FPO 2 - Ft. Myers Plant</i> <i>PO Box 14000</i> PO Box 14000 <i>FI</i> <i>Juno Bch</i> 33408 <i>33408</i></p>	<p>D. Is delivery address different from item 12? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below: _____</p> <p>3. Service Type <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>2. Article Number (Copy from service label) <i>Z 341 355 288</i></p>	
<p>PS Form 3811, July 1999 Domestic Return Receipt 5-99-M-1789</p>	

Z 341 355 275

US Postal Service
Receipt for Certified Mail
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Sent to <i>M. W. Reichel, Gen. Mgr.</i>	
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Post Office, State, & ZIP Code <i>Ft. Myers FL 33905</i>	
Postage	\$
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TOTAL Postage & Fees	\$
Postmark or Date <i>5/2/00</i> <i>DCA 0710002-008-Ac</i>	

PS Form 3800, April 1995

In the Matter of an
Application for Permit by:

Mr. William Reichel, General Manager
FPL Fort Myers Plant
Post Office Box 430
Fort Myers, Florida 33905

DEP File No. 0710002-008-AC
FPL Fort Myers Repowering Project
Steam Blows
Lee 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 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 February 7, 2000 to the Department for a modification of their air permit to temporarily allow excess nitrogen oxides emissions period during the conversion of the combustion turbines to combined cycle mode. The Fort Myers Plant is near Tice, Lee County.

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

The Department intends to issue this air construction permit modification based on the belief that reasonable assurances have been provided 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, 62-296, 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. 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. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. 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). The Department suggests that you publish the notice within thirty days of receipt of this letter. 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 or other authorization. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit 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.

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. Mediation is not available in this proceeding.

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. 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.



C. H. Fancy, P.E., 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) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5/2/00 to the person(s) listed:

William Reichel, FPL*
Richard Piper, FPL
David Knowles, DEP SD
Gregg Worley, EPA
John Bunyak, NPS

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.

Charlatta Hayes 5/2/00
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0710002-008-AC

FPL Fort Myers Repowering Project
Lee 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). This permit modification is to revise some specific conditions and to allow increased NO_x emissions during the conversion of the planned combustion turbines to combined cycle operation at the Fort Myers Plant near Tice, Lee 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 & Light, Fort Myers Plant, Post Office Box 430, Fort Myers, Florida 33905.

The approved FPL Fort Myers repowering project is under construction. When complete, the boilers and stacks associated with the existing residual oil-fired units will be dismantled and replaced by six natural gas-fired combustion turbines. Each combustion turbine will generate electrical power via an electrical generator driven directly by a shaft from the combustion turbine. The exhaust from each combustion turbine will be routed through a dedicated waste heat boiler. Steam from the six boilers will drive two existing steam electrical generators that will be retained.

Each combustion turbine will initially be tested for compliance with permit conditions and then operate in simple cycle mode without the steam cycle. Each will then be integrated into the steam cycle. As part of this phase, steam will be used to clean the piping system for each waste heat boiler of dirt and debris accumulated during construction. This steam will be vented rather than used to make electricity. To minimize the water requirements and avoid wastage of steam, the combustion turbines will be operated at a reduced load during the "steam blows." Emissions will be higher because the burners do not operate in full lean premixed mode at low load.

Although greater nitrogen oxides emissions are expected during the steam blows, concentrations will not exceed the NO_x limit of 40 CFR, Subpart GG: 75 ppmvd at 15 % O₂. Steam blows will occur intermittently during a period of 30 days per combustion turbine and wastes heat boiler combination. Thereafter steam blows will occur intermittently during a period of 60 days for the entire system. It is estimated that the total duration of low load operation will not exceed 288 hours per unit. Additional NO_x emissions are estimated to be 49 tons per unit.

The limited excess emissions are not significant compared to the overall reduction in emissions due to the repowering project. Additional air quality reviews were not required.

The Department will issue the FINAL permit 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.

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, 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 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)488-0114
Fax: (850)922-6979

Florida Department of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
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 850/488-0114, for additional information.

May XX, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William Reichel
General Manager
FPL Fort Myers Plant
Post Office Box 430
Fort Myers, Florida 33905

Re: FPL Ft. Myers Repowering Project
Steam Blow Operations
DEP File No. 0710002-008-AC

Dear Mr. Reichel:

The Department reviewed your request dated February 7, 2000 and additional information received on April 3 for a modification of air construction permit number 0710002-004-AC applicable to the Fort Myers Repowering Project. The modification is to allow increased nitrogen oxides emissions from the combustion turbines while they are being converted to combined cycle mode. Several other changes or clarification were requested.

FPL requested modification of Specific Condition 22 to allow correction of volatile organic compound (VOC) emissions concentrations by subtracting background concentrations. The Department already discussed this issue in the Final Determination accompanying the permit for the repowering project. Based on the tests conducted at the Martin Plant, emissions of VOC after tuning were less than 0.5 ppm without subtraction of ambient VOC concentrations. The turbine will destroy ambient VOCs, which are probably comprised of different constituents than the VOCs emitted from the turbine. The emission level agreed to by FPL has already been demonstrated without subtraction of background contribution.

If the units exceed 1.4 ppm, the Department will consider at that time whether subtraction of ambient air concentrations is warranted. We have received no similar requests from the many other applicants proposing the same type of combustion turbines. The Department believes that the combustion technology employed by FPL is representative of the Best Available Control Technology. At such low levels, the difference between two very low numbers will not be accurate or precise. It should be noted that the stack test requirements are only initial performance tests. Although some unspecified amount of air bypasses the combustors, it will still be subjected to temperatures high enough to reduce VOCs to levels required by the permit.

The air construction is hereby modified as follows to reflect the other requests:

PLACARD PAGE

The project also includes a cooling tower for once-through brackish water ~~and a small boiler or six direct-fired heaters with a 30-foot stack~~ 21-foot stacks to heat the natural gas prior to use during simple cycle operation and cold start-ups.

SECTION I, SUBSECTION B. EMISSION UNIT No. 24

~~Natural Gas Boiler or six direct-fired Heater(s)~~

SECTION III, SPECIFIC CONDITION No. 19 - Last Paragraph

NO_x emission limit from the ~~six gas heaters/boiler~~ shall not exceed 0.10 lb/mmBtu (at ISO conditions) to be demonstrated by an initial stack test on two of the six heaters.

SECTION III, SPECIFIC CONDITION No. 21 – Add Paragraph

CO emission limit from the six gas heaters shall not exceed 0.15 lb/mmBtu (at ISO conditions) to be demonstrated by an initial stack test on two of the six heaters.

SECTION III, SPECIFIC CONDITION No. 24 – Add Paragraph

The following NO_x excess emissions periods are applicable only at the end of construction and shall not exceed a total of 90 days per construction turbine:

- Emissions of NO_x from the combustion turbines (CTs), in excess of the BACT limit established in Specific Condition 19, resulting from steam blow activities associated with bringing the heat recovery steam generators into operation shall be permitted provided that best operational practices are adhered to and that the Subpart GG NSPS limit of 75/110 ppmvd @15% O₂ is not exceeded. The period during which such excess emissions are authorized shall not exceed a total of 90 days per combustion turbine. The applicant shall record for each CT unit the periods of startup for each operating mode. Excess emissions during the periods of startup shall be reported to the FDEP South District office within 30 days.
[Applicant Request (FPL estimates that CT emissions will comply with the NSPS NO_x limit following initial compliance testing, but that low load operation necessary for steam blow activities prior to initial combined cycle operation will result in NO_x emissions above the BACT limit of 9 ppmvd @15 percent O₂. Excess emissions of NO_x resulting from steam blows may occur intermittently over a period of up to 30 days per CT initially, followed by a period of up to 60 days of intermittent steam blows for the piping systems serving the six interconnected combined cycle units)].

SECTION III, SPECIFIC CONDITION No. 27

Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate at which each unit configuration (i.e., simple cycle and combined cycle) will be operated, but no later than 180 days following initial operation of ~~the~~ each unit configuration, and annually thereafter.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this AIR CONSTRUCTION PERMIT MODIFICATION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on _____ to the person(s) listed:

William Reichel, FPL*
Richard Piper, FPL
David Knowles, DEP SD
Gregg Worley, EPA
John Bunyak, NPS

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)

(Date)



RECEIVED

APR 03 2000

BUREAU OF AIR REGULATION

March 28, 2000

Mr. Al Linero, 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**
Air Construction Permit #0710002-005AC
Excess Emissions During Steam Blows

Dear Mr. Linero:

Following are responses to the three questions posed in your correspondence of March 13, 2000:

1. *[Provide] the actual estimated total hours and the additional emissions (e.g. in tons) for each unit during the 90 day period of time requested for the steam blows.*

Response: FPL anticipates that a total of 288 hours per combustion turbine (out of a possible 2,160 hours) will be required to perform all the necessary steam blows during startup of the HRSG's at Fort Myers. This is approximately equivalent to 49 tons of NOx per CT. I would like to reiterate that these values are estimates only, and that the actual times may vary from these numbers. As stated previously, these blows will be undertaken intermittently over an approximate 90-day period for each CT / HRSG combination. FPL will take all reasonable steps to minimize the extent and duration of excess emissions, in accordance with our normal operating practices and with the requirements of rule 62-210.700, F.A.C..

2. *As discussed with you by telephone on March 7, 2000, we need a reconciliation of your letter dated November 6, 1998 to Lee County with the present application.*

In my letter to Lee County, I stated that the maximum operating duration of existing Units 1 and 2 during 2001 would be 5 and 2 months, respectively, and that the CT's would be operating in simple cycle mode during that year, for varying periods of time. As I stated on our telephone call, FPL's plans have changed somewhat, in that we now project the steam units to operate for a longer period of time that year; however, the basic conclusion regarding PSD applicability remains the same; i.e. PSD would not be applicable. I have attached a matrix demonstrating that for your reference. As you can see, all pollutant emissions decrease during 2001 with the exception of VOC emissions, which are projected to increase by 21 tons, which is less than the PSD applicability limit of 40 tons.

3. *As discussed with you and source testing staff on March 10, we need some test data to verify that emissions of VOC are likely to be greater than the permitted limit as a result of contribution of ambient VOC before we can consider allowing a correction. We also need to know the amount of bypass or cooling air that is not subjected to high enough temperature to destroy incoming VOC.*

FPL does not currently possess test data that supports the premise that ambient VOC's would definitely cause us to be unable to meet our VOC limit. What we do have, however, is the GE Standard Field Testing Procedure for Emission Compliance (attached) which is part of the guarantee package for the 7FA combustion turbines. In that document, please note that in Section II.A. Emission Testing – General, GE states that "GE guarantees apply to the net increase of these pollutant emissions". Therefore, FPL would have no contractual recourse with GE, should ambient VOC concentrations cause FPL to exceed what even you have conceded is an extremely low VOC limit of 1.4 ppmvd.

With respect to the amount of cooling air that bypasses the combustion zone, I have been told this is GE proprietary information. I would suggest you contact Joel Chalfin at GE [(518) 385 4698], whom I believe you know, for additional information regarding the bypass air and VOC issue.

Based on our GE guarantee verbiage, I feel compelled to reiterate the request for a change in the permit language to allow for subtraction of ambient VOC levels. I would be willing to report both the "raw" and "ambient-subtracted" data, if that would make the Department more comfortable.

I am hopeful that the information provided is responsive to your questions. If you should have additional questions or wish to discuss this further, please don't hesitate to contact me at (561) 691-7058.

Very truly yours,



Rich Piper
Repowering Licensing Manager
Florida Power & Light Company

cc: T. DeLeon, BAR

SD
EPA
NPS

Table 1a. Comparison of Representative Future Actual Emissions During 2001 versus Past Actual Emissions for Fort Myers Repowering Project

	Annual Capacity Factor	Particulate ^a	Nitrogen Oxides ^b	Sulfur Dioxides ^b	Carbon Monoxide ^a	Volatile Organic Compounds ^c
Representative Actual Annual Emissions						
Unit 1	100%	577	3,301	20,356	888	37
Unit 2	100%	929	14,489	48,180	2,628	87
Simple Cycle Operation	100%	267	1,845	137	1,267	82
Representative Future Actual Emissions During 2001						
Unit 1	28.00%	162	924	5,700	249	10
Unit 2	28.00%	260	4,057	13,490	736	24
Simple Cycle Operation ^d	39.58%	105	730	54	502	33
Total:		527	5,712	19,244	1,486	67
Past Actual Emissions		607	7,095	20,561	1,507	47
Net Emissions Change		-80	-1,383	-1,317	-21	21

Notes:

a - based on stack test data for Units 1 and 2 for PM and stack test data for similar units for CO.

b - based on CEM data for Units 1 and 2

c - based on AP-42 for Units 1 and 2

d - months of maximum potential operation for CTs; CT2A - 11 months, CT2B - 11 months,

CT2C - 10 months, CT2D - 9 months, CT2E - 8 months and CT2F - 8 months; 57 months/6 CTs = 9.5 months

assume 50% capacity for 9.5 months for all 6 CTs; $9.5/12 \times 50\% = 39.58$



Post-It [®] Fax Note	7671	Date	# of pages ▶
To	RICH PIPER	From	JOEL CHAPIN
Co./Dept.		Co.	
Phone #		Phone #	
Fax #	561-691-7070	Fax #	

GEK 28172F
Revised, March 1999

GE Power Systems
Gas Turbine

U.S. Standard Field Testing Procedure for Emission Compliance

I. TEST PHILOSOPHY

Testing to demonstrate emission guarantees and for adjustment of the NO_x reduction system (if required) will be performed using procedures which are mutually agreed between GE and the Purchaser. GE engineers and/or technical advisors may be present at the tests for procedural direction. Test methods chosen are EPA methods which yield data on site immediately, wherever possible.

II. EMISSION TESTING

A. General

Emission testing identified herein shall be within [GE's] or [Customer's] scope of supply using procedures which are mutually agreed. Sampling for inlet concentrations may be required, at the sole discretion of GE, in order to demonstrate compliance with emission guarantees. GE guarantees apply to the net increase of these pollutant emissions.

B. Nitrogen Oxides Emissions

Before the official compliance testing is begun, the NO_x reduction system will be adjusted to verify compliance with NO_x emission limits. The gas turbine control system contains a pre-programmed schedule for either water or steam injection, this schedule may be adjusted to achieve an appropriate emission level approximately 5% to 10% below emission limits, and minimize the supply requirements. Once the proper injection schedule has been established, this schedule is maintained throughout the testing, and it is programmed into the control system.

The NO_x emission testing and related oxygen testing will be in accordance with U.S. EPA Method 20 presented in the Code of Federal Regulations, Title 40, Part 60 (40CFR60 Appendix A and 40CFR60 Subpart GG - Standards of Performance for Stationary Gas Turbines), with the following modifications, limitations and additions:

1. The NO_x instrument will be limited to a chemiluminescent type which meets 40CFR60 Appendix A, Method 7E.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes the matter should be referred to the GE Company.



RECEIVED

FEB 14 2000

February 7, 2000

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.
State of Florida
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: **FPL Fort Myers Repowering Project**
Revision to Air Construction Permit No. 0710002-004-AC

Dear Al:

0710002-008-AC

As you are aware, FPL has begun construction of its repowering project at its Fort Myers Plant. I am writing regarding the possibility that excess emissions will occur during the steam blows necessary during startup of the combined cycle plant. While steam blows are a normal and essential part of the startup process for such facilities, unique aspects of the Fort Myers project configuration and schedule may require temporary relief from certain emission limits over finite periods of time. Following is some information about the steam blows, the regulatory framework, and a suggested course of action. We are also requesting several other unrelated minor changes to the permit language.

Fort Myers Combined cycle Startup

The Fort Myers combined cycle facility, once constructed, will be a unique configuration that does not exist anywhere else in the world, as far as FPL is aware. Six combustion turbine (CT)/ heat recovery steam generators (HRSG) will generate power and produce sufficient steam to drive two steam turbine-generators in series (see Figure 1). Effectively, eight electric generators will be tied together as one unit, when operating in combined-cycle mode.

The startup schedule for the repowered Fort Myers plant/units calls for initial operation in simple cycle mode (i.e. CTs only, with no heat recovery steam generators in service), beginning in November 2000, to provide additional reserve margin during the winter 2000-01 and summer 2001 peak demand periods. A shift to combined cycle operation will occur in April / May 2002. (see Figure 2).

The individual combustion turbine units will undergo the NSPS performance testing in early 2001, and be in commercial operation after that time. Later, beginning in August 2001, steam blows of the HRSG's and HRSG piping will begin.

Steam Blows

Steam is used to clean the piping system for each HRSG of dirt and debris which may have been deposited during or prior to construction. In order to generate the steam, the "blanking plate" which is used to block the CT exhaust gases from entering the HRSG

during simple cycle operation, will be removed, and the hot (~1,100 °F) CT exhaust gases will be allowed to enter the HRSG which will then produce steam. The steam will be directed through the piping system(s) to be cleaned, and then vented in a number of areas around the plant site. The locations of the steam vents will be dictated by the configuration of the particular piping systems being cleaned and available space.

As may be expected, the venting of this steam necessitates the production of significant quantities of makeup water to the system. FPL estimates that, at times, the quantity of water that will need to be provided to the HRSG(s) during steam blows will approach 800 gallons per minute. This challenges FPL's ability to make up water fast enough to keep up with the losses.

In order to minimize the amount of steam produced, the combustion turbine will be operated at reduced load (less than 50% load) during the blows. This will allow for the optimizing of steam blows, to ensure that the correct Cleaning Force Ratio (CFR) is achieved. This also will enable the blows to occur for longer periods of time without running out of makeup water.

Cleaning Force Ratio (CFR) is the ratio of steam blow conditions versus design operating conditions. The ratio combines aspects of pressure, temperature and flow of steam required to clean the inside of the steam systems prior to their operation. A CFR of greater than 1 is required (1 being equal to normal operating conditions). A CFR of 1.5 will be targeted, thus ensuring that all debris inside the piping systems is removed prior to the start of normal operation.

General Electric guarantees that emissions from its Frame 7FA combustion turbines will remain in compliance at loads above 50% (see Figure 3). Operating the combustion turbines during steam blows at reduced loads in combined cycle configuration will potentially result in emissions of NO_x in excess of the BACT limit of 9 ppm established in Specific Conditions 18 and 19 of the permit.

From a regulatory perspective, the CT's in simple-cycle mode will have demonstrated compliance well within the usual 180-day window of time granted for initial startup and shakedown of the equipment. Therefore allowance for temporary excess emissions associated with the steam blows needs to be provided for in another fashion.

In most combined cycle startup schedules, the steam blows and associated excess emissions would be completed within the 180 days afforded for this activity; the activity would take place anyway, the timing of the activity is the unusual aspect of this project.

FPL believes we can manage the steam blows in such a fashion as to remain in compliance with NSPS Subpart GG limits for NO_x emissions (i.e. 110 ppmvd or 753.7 lb. / hour corrected to 15% oxygen); however NO_x emissions during the steam blows may be in excess of the BACT limit (9 ppm) for this facility.

The period during which the steam blows may occur is estimated to be up to 30 days (intermittently) per combustion turbine initially, followed by a period of up to 60 days of intermittent steam blows for the piping systems as they are tied together.

Regulatory Background

The NSPS rules [40 CFR 60.8(a)] require that the performance test (actually initial emissions compliance testing) be conducted within 180 days of initial startup, or within 60 days of achieving the maximum production rate, whichever comes first.

The intent of this rule, FPL believes, is to provide sufficient time to start up a new emissions source, "debug" it, and conduct the initial testing within a reasonable length of time.

Suggested Course of Action

While the steam blows are essentially a startup event for the CT's in combined cycle mode, the Fort Myers project configuration and schedule require that this activity occur after the initial 180-day startup window has elapsed. To accommodate this unique circumstance FPL requests that the Department exercise its discretion under FAC Rule 62-210.700(1) and (5) to authorize excess NOx emissions during these steam blows. This authorization could be accomplished by revision of the project's air construction permit, with appropriate constraints on the duration and magnitude of the excess emissions.

Accordingly, the following language is suggested:

24. Excess Emissions Requirements:

- Excess emissions resulting from startup, shutdown or malfunction of *the combustion turbines and heat recovery steam generators* shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emission 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 cold start-up to combined cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a startup to combined cycle operation following a complete shutdown lasting at least 48 hours.
- Excess emissions from the combustion turbines resulting from startup of *the steam turbines system* 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 12 hours per cold startup of the steam turbine system.

[Applicant Request (FPL estimates that, on average there will be approximately 12 startups to combined-cycle operation per year), G.E. Combined Cycle Startup Curves Data and Rules 62-210.700, 62-4.130 F.A.C.]

- Emissions of NOx from the combustion turbines, in excess of the BACT limit established in Specific Condition 19, resulting from steam blow activities associated with bringing the heat recovery steam generators into operation shall be permitted provided that best operational practices are adhered to and that the Subpart GG NSPS limit of 75/110 ppm is not exceeded. The period during which such excess emissions are authorized shall not exceed a total of 90 days per combustion turbine. The applicant shall record for each CT unit the periods of startup for each operating mode. Excess emissions during the periods of startup shall be reported to the FDEP South District office within 30 days.

[Applicant Request (FPL estimates that CT emissions will comply with the NSPS NOx limit following initial compliance testing, but that low load operation necessary for steam blow activities prior to initial combined cycle operation will result in NOx emissions above the BACT limit of 9 ppm; excess emissions of NOx resulting from steam blows may occur intermittently over a period of up to 30 days per CT initially, followed by a period of up to 60 days of intermittent steam blows for the piping systems), G.E. Combined Cycle Startup Curves Data and Rule 62-210.700, F.A.C.]

27. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate at which each unit configuration (i.e., simple cycle and combined cycle) will be operated, but no later than 180 days following initial operation of ~~the~~ each unit configuration, and annually thereafter...

Additional requested changes

A couple of other relatively minor changes to the Air Construction permit are requested, as a result of further evaluation of the combined cycle facility.

First, Specific Condition 22 is requested to be amended as follows, in order to account for the presence of any background volatile organic compounds:

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

The Project and Location section on the placard page incorrectly describes "one 30 foot stack" for the fuel gas heaters. There will actually be six, 21-foot stacks. Also, FPL has elected to install direct-fired heaters, rather than a boiler for this purpose. Therefore, we suggest the following language change to the last sentence:

"The project also includes a cooling tower for once-through brackish water ~~and a small boiler or~~ six direct-fired heaters with a 30-foot stack 21-foot stacks to heat the natural gas prior to use during simple cycle operation and cold start-ups".

The Emission Units section on page 2 of the permit describes emission unit 024 as "Natural Gas Boiler or Heater(s)". We request that the description be modified to "Six direct-fired heaters".

The final bullet under Specific Condition 19 requires that the NOx emission limit for the gas heaters / boiler to be demonstrated by stack test. FPL requests that an initial stack test should be sufficient to demonstrate compliance, and additionally that two of the heaters should be representative of the six. Therefore the following language is suggested:

"NOx emission limit from the six gas heaters / boiler shall not exceed 0.10 lb. / mmBtu (at ISO conditions) to be demonstrated by an initial stack test on two of the six heaters."

I would be pleased to answer any questions you may have. At your convenience, please feel free to contact me at (561) 691-7058 or via email at rich_piper@fpl.com.

Very truly yours,

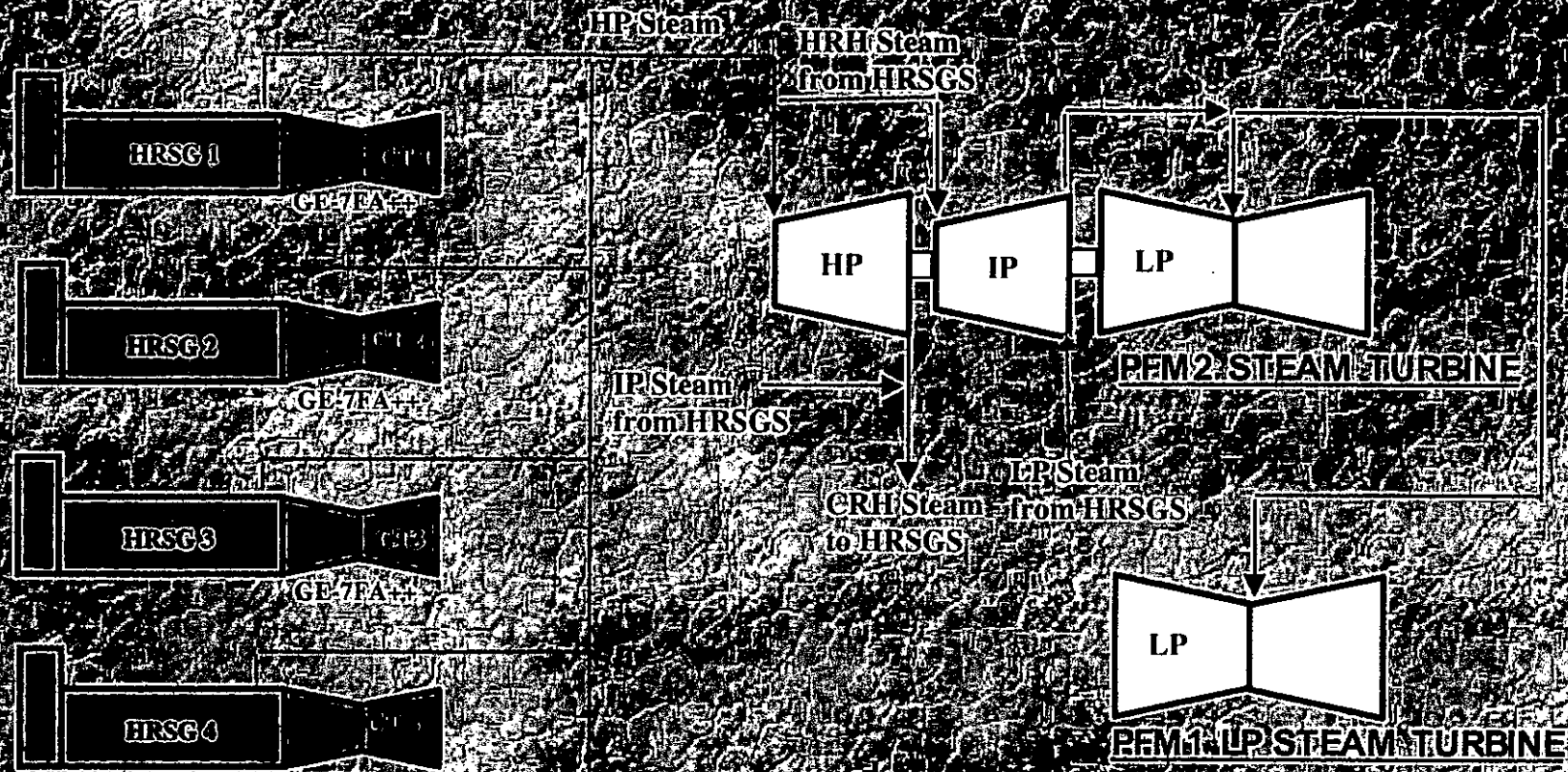
A handwritten signature in cursive script that reads "Richard Piper".

Richard Piper
Licensing Manager
Florida Power & Light Company

cc: SD

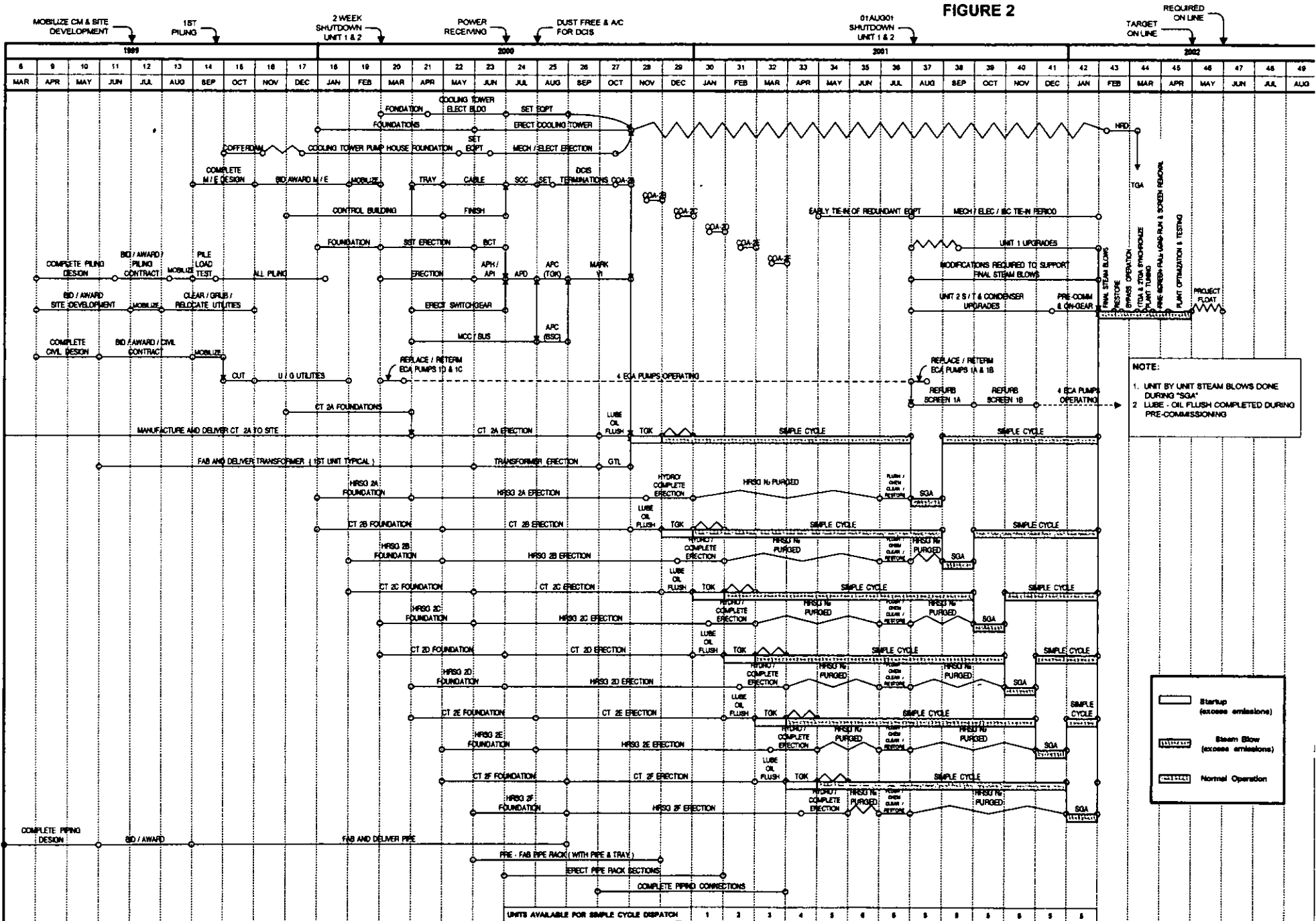
M. Halpin, BAR
T. Heron, BAR

FIGURE 1

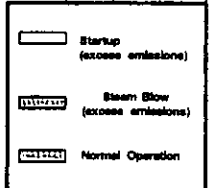


**FORT MYERS
PLANT
REPOWERING**

FIGURE 2



NOTE:
 1. UNIT BY UNIT STEAM BLOWS DONE DURING "SGA"
 2. LUBE - OIL FLUSH COMPLETED DURING PRE-COMMISSIONING



FILE NAME: PFL_FORT MYERS_4_VSD UPDATED: JUNE-23-99 PRINTED: 3:28:31 PM 2/10/00

4	14-JUN-99	REVISED FOR EARLY SIC POWER	MJF	MG	
3	30-APR-99	UPDATED AUX POWER LOGIC	MG	MAAM	
2	30-SEP-98	UPDATED FROM 29SEP98	ATK	MAAM	
1	23-SEP-98	UPDATED FOR PFL MEETING	MFJ	MG	
NO	DATE	REVISION / RECORD OF ISSUE	BY	CHK	APP

BLACK & VEATCH

ENGINEER: M. MODERHOTT DRAWN: M. FITZGERALD

CHECKED: DATE: 22-APR-99

APC: 603 V POWER 1: 780 STEAM PUMPS - UNIT 1
 APH: 1-14-99 2: 780 STEAM TURBINE - UNIT 1
 APB: 30-APR-99 3: 780 COMBUSTION TURBINE
 APD: 23-SEP-98 4: 780 CYCLE DEVELOPMENT

SGA: 100% OIL/WATER 1: 780
 OIL/WATER SPECIAL OIL/WATER (W/ OIL)
 OIL/WATER SPECIAL OIL/WATER (W/ OIL)
 OIL/WATER SPECIAL OIL/WATER (W/ OIL)
 OIL/WATER SPECIAL OIL/WATER (W/ OIL)

**FLORIDA POWER & LIGHT
 FORT MYERS PROJECT**

6 ON 2 1500 MW CC REPOWERING

DRAWING NUMBER	REV
6062-0020-VD1001	4
CODE	AREA
PAGE 1 OF 1	

Memorandum

Florida Department of Environmental Protection

TO: C. H. Fancy
THRU: A. A. Linero *aaf 4/26*
FROM: Teresa Heron
DATE: April 26, 2000
SUBJECT: FPL Ft. Myers 1500 MW Repowering Project
DEP File No. 0710002-008-AC

Attached is the draft public notice package including the draft letter for the modification of the Ft. Myers Repowering Project permit. The modification is to revise some conditions and to temporarily allow excess NO_x emissions from the combustion turbines while there are being converted to combined cycle mode.

The original project netted out of PSD and no BACT was required. Although emissions will increase during this limited period, the non-PSD determination of the original review remains unchanged.

We denied a request to subtract background ambient concentrations from those measured at the turbine outlet. They simply did not provide anything to back up their request. Our opinion is that they do not require this correction to pass their VOC compliance test.

We recommend your approval of the attached package.

AAL/th

Attachments

*We are on ~ day 23 today.
Received application date 2/7 on 2/14
Additional info date 3/28 on 4/3*