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■ 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.	A. Received by (*Please Print Clearly*) MARY K. RUSSELL B. Date of Delivery C. Signature X Mary K. Russell ☐ Agent ☐ Addressee D. Is delivery address different from item 1? ☐ Yes If YES, enter delivery address below: ☐ No
1. Article Addressed to: Mr. William Reichel General Manager FPL Fort Myers Plant P. O. Box 430 Ft. Myers, FL 33905	3. Service Type ☒ Certified Mail ☐ Express Mail ☐ Registered ☐ Return Receipt for Merchandise ☐ Insured Mail ☐ C.O.D. 4. Restricted Delivery? (*Extra Fee*) ☐ Yes
2. Article Number 7001 0320 0001 3692 8048	

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

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City, State, ZIP+4 Ft. Myers, FL 33905

PS Form 3800, January 2001 See Reverse for Instructions

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 16, 2002

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
Simple Cycle GE Frame 7A Combustion Turbines
DEP File No. PSD-FL-298 A and 0710002-009-AC

Dear Mr. Reichel:

The Department reviewed your request dated July 29, 2002 for extension of the referenced air construction permit. The request is to extend the dates for completion of physical construction and permit expiration.

The Department hereby determines that the request to extend the permit expiration date along with the date to complete construction is acceptable. The following permit specific conditions are hereby modified:

FIRST PAGE OF PERMIT

Expires: April 30, ~~2003~~ **2004**

SECTION II – Condition 8

PSD Approval to Construct Expiration: Approval to construct shall become invalid ~~if construction is not commenced within 18 months after receipt of such approval or~~ if construction is discontinued for a period of 18 months or more, or if **physical** construction is not completed ~~within a reasonable time~~ **by August 1, 2003**. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

SECTION II – Condition 9

Completion of Construction: The permit expiration date is April 30, ~~2003~~ **2004**. Physical construction shall be complete by August 1, ~~2002~~ **2003**. The additional time provides for testing, submittal of results, and submittal of the Title V permit to the Department.

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

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.

This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this order will not be effective until further order of the Department.

Any party to this permitting decision (order) has the right to seek judicial review of it under section 120.68 of the Florida Statutes, 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

for Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this PERMIT MODIFICATION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 8/16/02 to the person(s) listed:

Cc: Ron Blackburn, DEP SD
Jeaneanne Gettle, EPA
John Bunyak, NPS
Barbara P. Linkiewicz, FPL
Ken H. Simmons, FPL

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.

Victoria Gibson August 16, 2002
(Clerk) (Date)

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1. Article Addressed to:

Mr. William Reichel
General Manager
FPL Fort Myers Plant
P. O. Box 430
Ft. Myers, FL 33905

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* MARY K. RUSSELL B. Date of Delivery

C. Signature X Mary K. Russell ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
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City, State, ZIP+4 Ft. Myers, FL 33905

PS Form 3800, January 2001 See Reverse for Instructions

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach,FL 33408

FPL

Mr. Clair H. Fancy
New Source Review Section
Bureau of Air regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

July 29, 2002

RECEIVED
JUL 30 2002
BUREAU OF AIR REGULATION

Re: FPL Fort Myers 340 MW Simple Cycle Project
Extension of Expiration Date
DEP File No. 0710002-009-AC (PSD-FL-298)

Dear Mr. Fancy:

This letter is in response to a letter from Mr. Linero to Mr. Bill Reichel, Plant Manager, Ft. Myers Plant dated 12/28/01. We are submitting the information below in order to complete the reasonable assurance requirement as found in Rule 62-4.080, F.A.C. We seek authorization to extend the construction completion date from August 1, 2002 to August 1, 2003 and to extend the permit expiration date from June 30, 2003 to December 31, 2003.

FDEP Comments and FPL Responses:

1. **List the remaining tasks to be performed to complete installation and fine-tuning of plant equipment and the approximate dates for completing those tasks.**

The Contract for Construction (EPC - Engineer, Procure &Construct) was awarded to Overland Contracting Inc (OCI) on May 22, 2002.
We have included photographs from June 24 and July 25, 2002 showing construction progress. Piling installation is complete. Equipment delivery is in progress.

The water tank has been relocated to the west of its original position. The excavation has been closed. The dewatering permit was revised and approved by the South Florida Water Management District on June 28, 2002.

The major construction project tasks that remain include installation of underground utilities, steel foundations, mechanical components, combustion turbines and all related equipment.

2. **Identify production and emission testing that needs to be conducted and provide estimated dates for completion of those tasks.**

Emissions testing for natural gas firing of the simple cycle units is scheduled for May 2003. Emissions testing for liquid fuel firing is scheduled for June 2003. We anticipate commercial operations will commence in June 2003.

3. **Provide a statement (and basis for believing) that the facility will comply with applicable regulation.**

The simple cycle combustion turbines are being constructed to conform with the operational and emission limitations of the air construction and PSD permit. This responsibility was fully accepted by providing the Owner/Authorized Representative Official Statement in the application for the air construction/PSD permit.

Most importantly, FPL has specific emission guarantees for the combustion turbines from the manufacturer (GE) that meet the emission limitations specified. This information was provided in the application for the air construction/PSD permit. The Martin Units 8A and 8B are the identical turbines as those being constructed at Fort Myers (i.e., GE Frame 7FA combustion turbine). The specific emission limiting standards in the air construction and PSD permit are also the same. The test data for the Martin Units 8A and 8B have demonstrated that the performance standards as specified in the permit can be achieved. In addition, test data from other FPL Projects (e.g., gas firing at Fort Myers in simple cycle mode) have met the same emission limits. As part of the operation of the project, there will be specific environmental guidelines for the operation of these turbines that will assure that the specific conditions of the air construction and PSD permit are met.

We believe the information provided above demonstrates that the extended permit will comply with the standards and conditions required by applicable regulations. If you require further information in order to authorize the change in completion and expiration dates, please contact either Ken Simmons at (561) 691-2216 or via email at k_h_simmons@fpl.com or me at (561) 691-7518 or via email at barbara_p_linkiewicz@fpl.com.

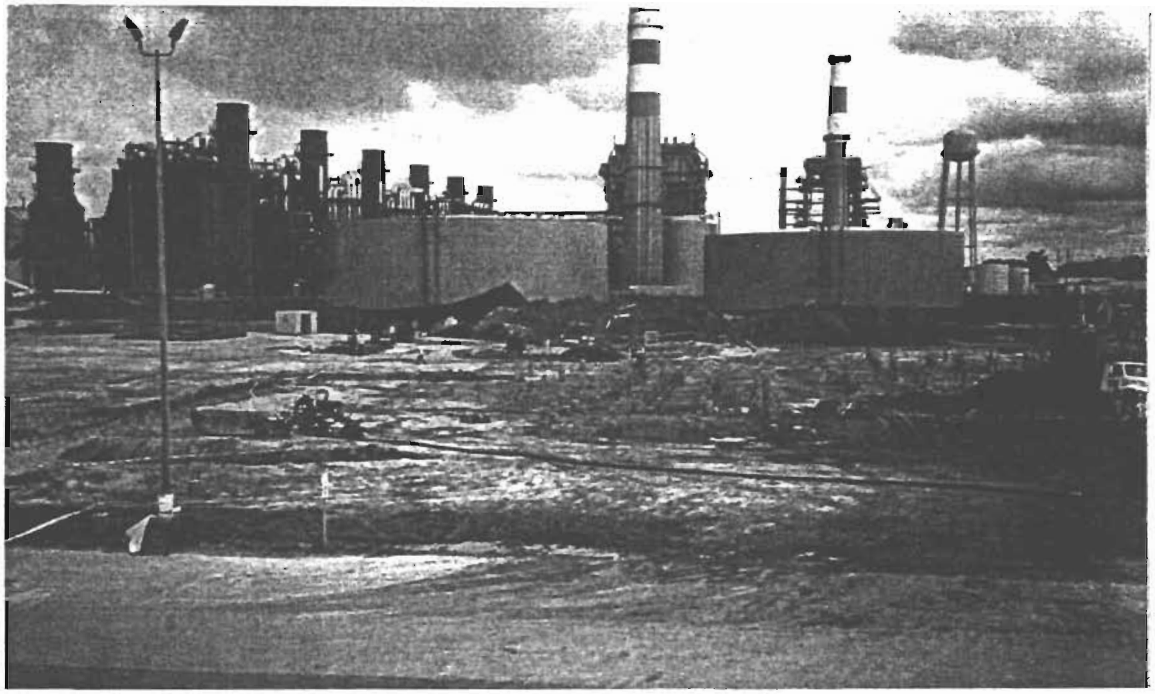
Thank you for your assistance in this matter.

Sincerely,

Barbara P. Linkiewicz

Barbara P. Linkiewicz
Sr. Environmental Specialist

cc: Mr. A.A. Linero, FDEP
Ms. T Heron, FDEP
Mr. W. Reichel, FPL

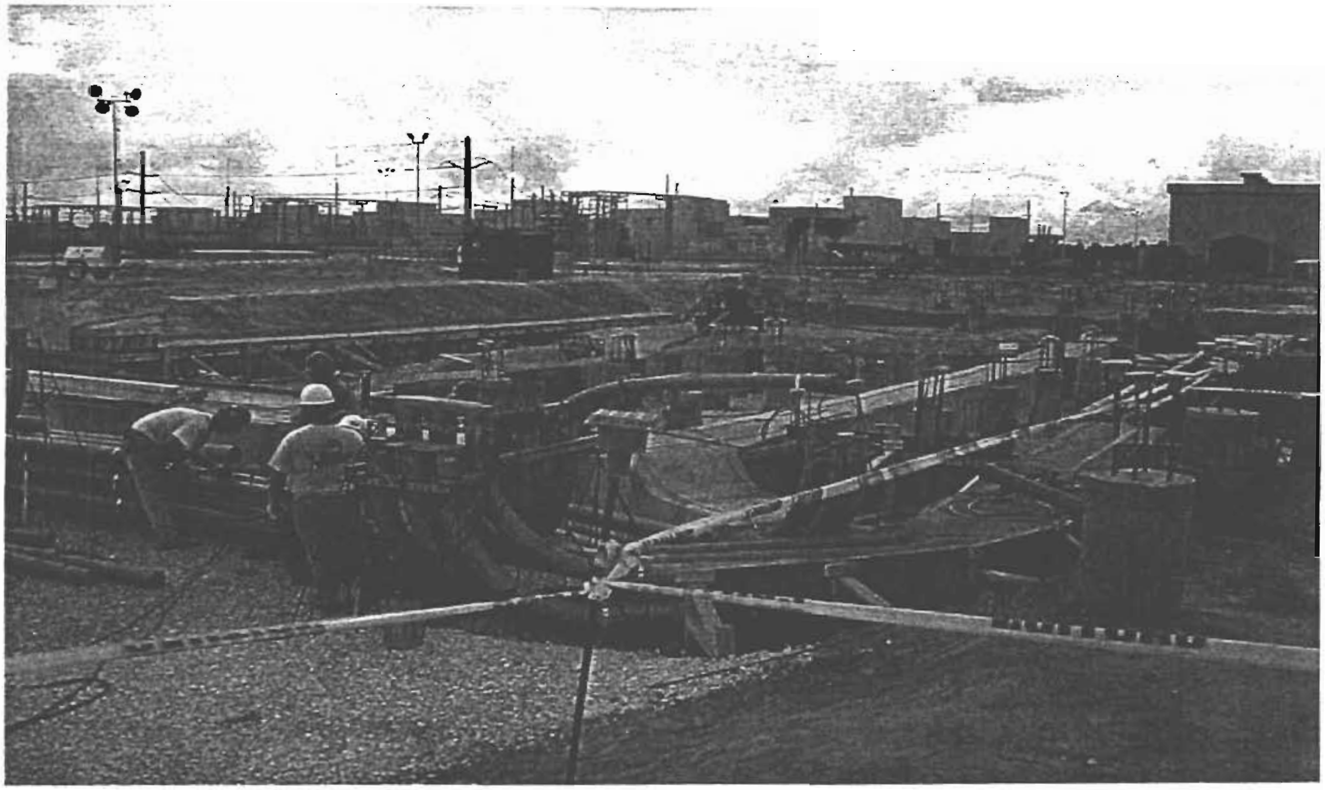


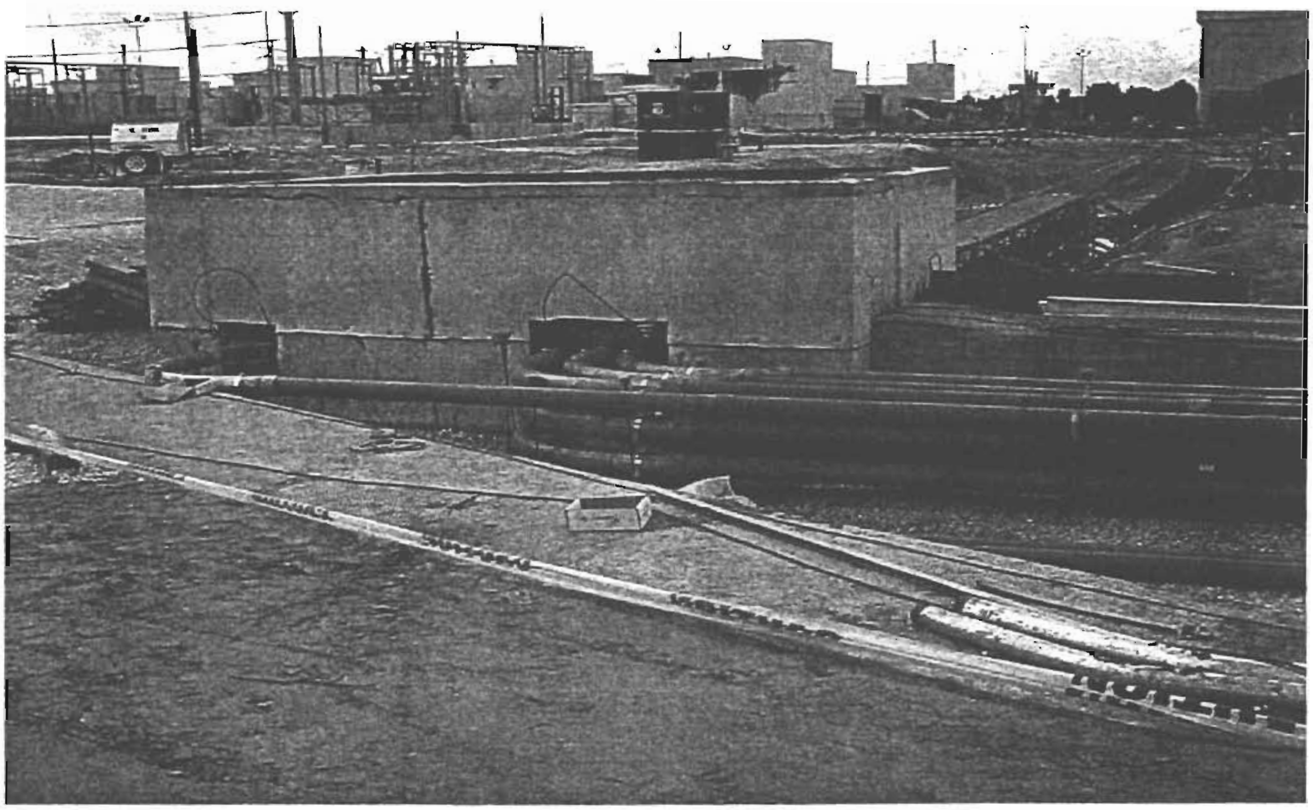
Fort Myers Plant - Simple Cycle Peaker Project - June 24, 2002

Fort Myers Plant - Simple Cycle Peaker Project - June 24, 2002

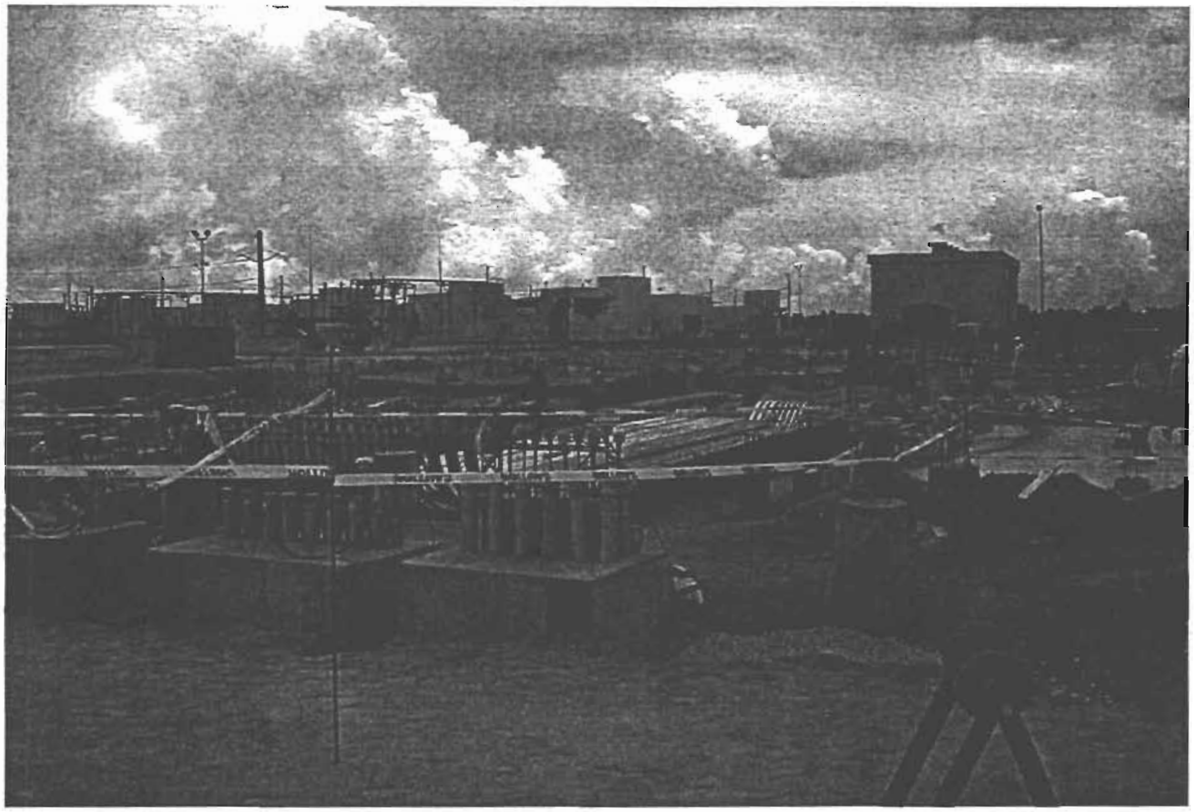
Fort Myers Plant - Simple Cycle Peaker Project - June 24, 2002

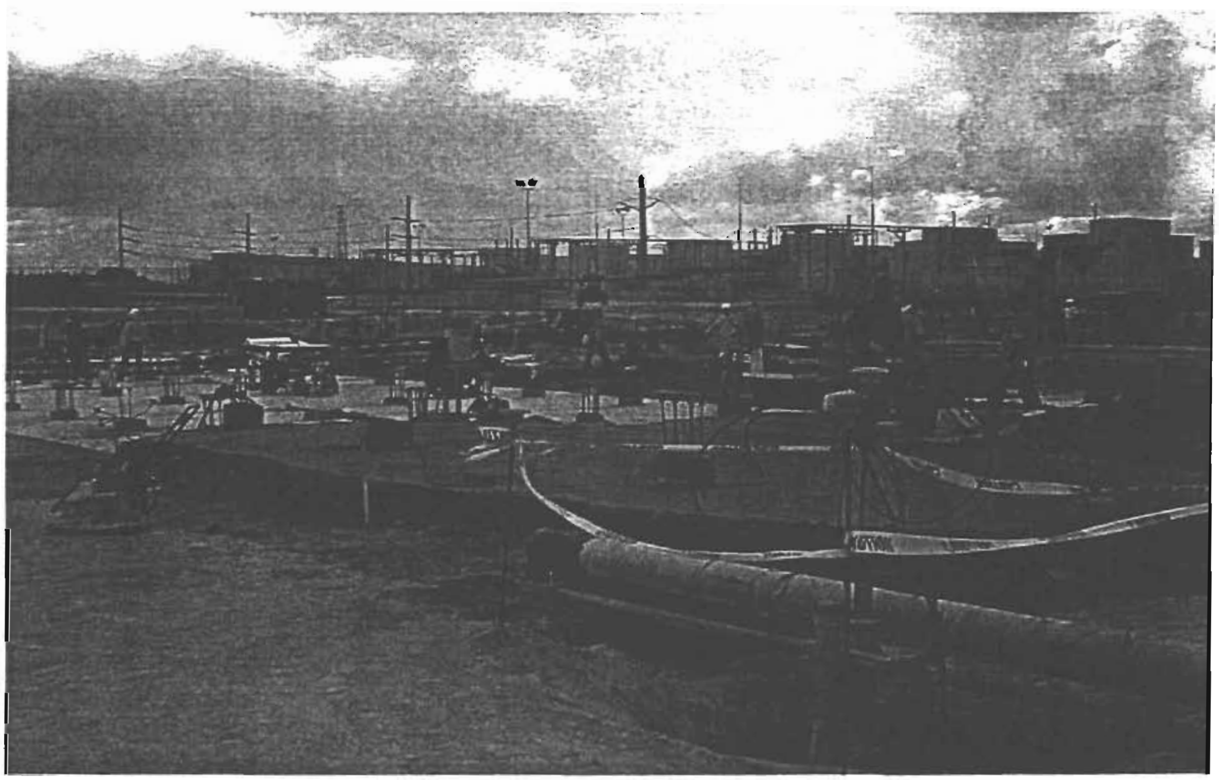
Fort Myers Plant - Simple Cycle Peaker Project - June 24, 2002



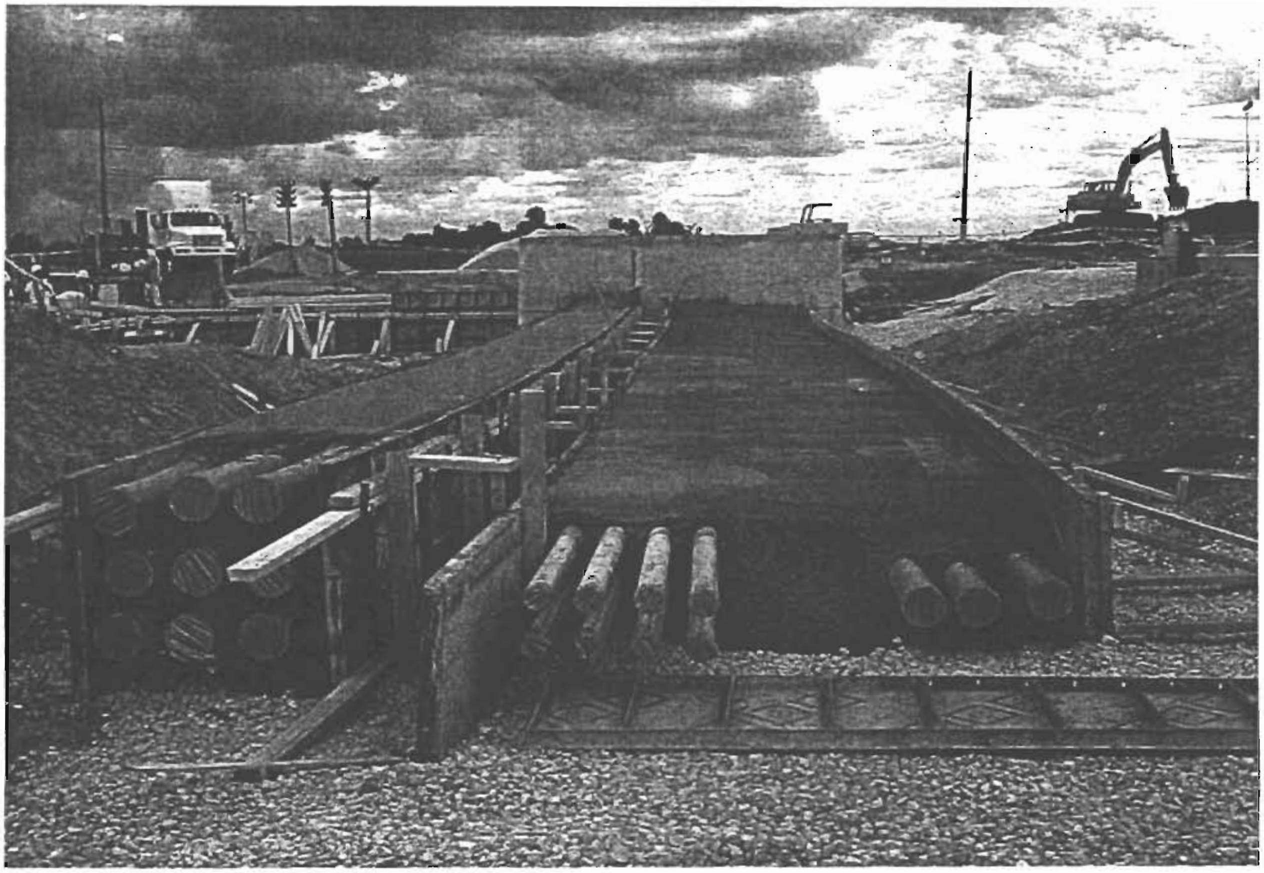


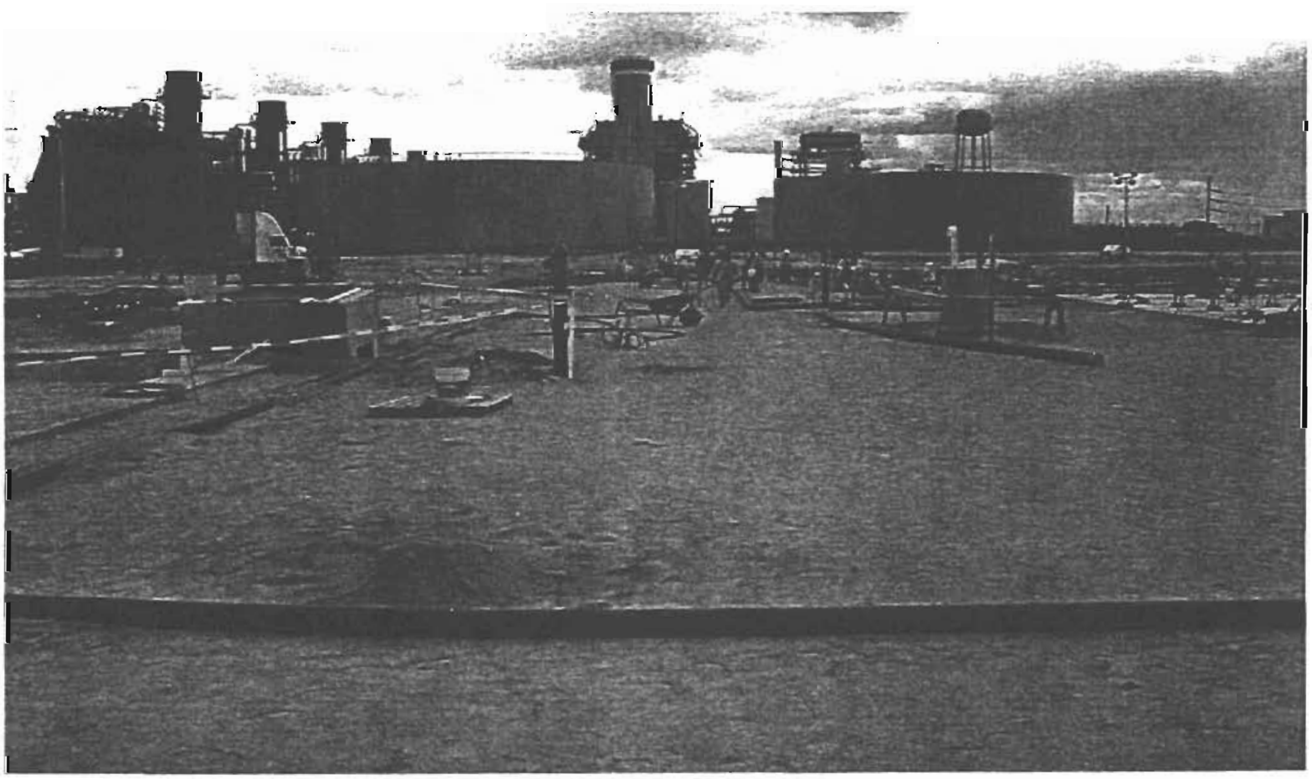
Plant Fort Myers - Simple Cycle Peaker Project - July 25, 2002





Plant Fort Myers - Simple Cycle Peaker Project - July 25, 2002





Plant Fort Myers - Simple Cycle Peaker Project - July 25, 2002

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

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. 0710002-009-AC
340 MW Simple Cycle Project
Lee County

_________________________________/

Enclosed is the Final Permit Number 0710002 -009AC to construct two (2) 170 megawatt General Electric MS7241FA gas-fired combustion turbine-generators with an 80-foot stack. The project also includes two natural gas heaters with 30-foot stacks. These units are located at the FPL Fort Myers Plant near Tice, Lee County. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; 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 of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

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 NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 12/22/00 to the person(s) listed:

Mr. William Reichel, FPL*
Mr. Richard Piper, FPL
Ms. Peggy Highsmith, SD
Mr. Doug Neeley, EPA
Mr. John Bunyak, NPS
Mr. 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.

Charlotte J. Hayes 12/22/00
(Clerk) (Date)

7099 3400 0000 1453 3136

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Mr. William Reichel

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Total Postage & Fees	$	

Name (Please Print Clearly) (to be completed by mailer)
Mr. William Reichel
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+4
Fort Myers, FL 33905

PS Form 3800, July 1999 — See Reverse for Instructions

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1. Article Addressed to:

Mr. William Reichel
General Manager
FPL Fort Myers Plant
PO Box 430
Fort Myers, FL 33905

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* MARY K. RUSSELL
B. Date of Delivery 12-28-00

C. Signature Mary K. Russell
☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 3136

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

FINAL DETERMINATION
Florida Power & Light Company
Fort Myers Power Plant
340 Megawatt Simple Cycle Project
DEP File No. 1270009-004 (PSD-FL-298)

The Department distributed a public notice package on October 26, 2000 for the project to construct/install two simple cycle units to provide additional power at the Florida Power & Light (FPL) Fort Myers Plant near Tice, Lee County. The Public Notice of Intent to Issue was published in Fort Myers News-Press on November 3, 2000.

No comments were received by the Department from the public or FPL. Comments were received from EPA by letter dated December 1, 2000. EPA commented only on the BACT and the Technical Evaluation and Preliminary Determination (TEPD).

The FPL and Department's responses are included following each comment:

1. EPA Comment: *We suggest you verify the independence of this simple cycle combustion turbine project from the previous combined cycle combustion turbine project already permitted, but not yet under construction, at the FPL - Fort Myers Plant. As part of the verification, please assess whether hazardous air pollutant emissions from the combined cycle and simple cycle combustion turbines should be added together to evaluate the potential applicability of 112(g) case-by-case maximum achievable control technology requirements.*

   FPL Response: Golder Associates previously addressed this matter on behalf of FPL by letter dated September 25, 2000. The letter states that "the simple cycle turbines were not considered in the initial plan of the 1998 projects. The Repowering Project and the proposed simple cycle are for two different purposes and identified separately. The need for the Fort Myers Repowering Project was identified in 1998 to provide the most efficient baseload electric power for the FPL system. In contrast, the need for new simple cycle units was identified in 1999 based on the increase in peak demand of electric power".

   FPL has identified the facility as a major source of hazardous air pollutants (HAP). However an evaluation of the HAP emissions from this project indicates that emissions are less than 25 TPY for all HAPs and less than 10 TPY for a single HAP. Therefore, the requirements of 40 CFR 63.43 for maximum achievable control technology are not applicable to this project.

   FDEP Response: Since the time that the repowering project was approved, the Public Service Commission increased the reserve power requirements from 10 percent to 20 percent for regulated power companies in Florida. This provides independent corroboration of FPL's explanation. Therefore the Department will not aggregate the HAP emissions from the projects to determine if a case-by-case MACT determination is required.

   Recent tests were conducted for volatile organic compounds (VOC) and carbon monoxide (CO) at an identical unit installed at the TECO Polk Power Project. Emissions of VOC were between 0.1 and 0.5 ppm at various loads between 50 and 100 percent of full load. CO ranged from 0.3 to 1.7 ppm.

These values are much less than VOC and CO measurements taken concurrently (on units with lower flame temperature) when the various HAP emission factors were developed. They provide additional assurance to the Department that HAP emissions from the project will not exceed applicable HAP thresholds. The results further suggest that the repowering project and the simple cycle project will not exceed the HAP thresholds.

2. *EPA Comment: The "Direct Annual Costs" section of the catalytic oxidation cost analysis lists an "Inventory Cost" (capital recovery for 1/3 catalyst) of $28,548/year. This figure is included in the economic analysis in addition to the "Catalyst Cost" of $224,667/year, which is already included in the "Direct Annual Costs" section of the economic analysis. Additionally, The Annualized Total Direct Capital figure of $176,070/year includes the capital recovery of the initial catalyst cost ($780,000) which is listed in the Direct Capital Costs section. Information should be provided in order to evaluate the need for both costs and verify that catalyst costs and capital recovery of the catalyst are not being double-counted.*

   DEP Response: No response was received from FPL regarding this matter. However, the Department concurs with EPA. It appears that the Annualized Total Direct Capital figure of $176,070/year already includes the capital recovery of the initial catalyst cost ($780,000) and the "Inventory Cost" of $28, 548 (capital recovery for 1/3 of the catalyst) is double-counted. Although the Department does not adopt the consultant's cost estimates, it still considers the levelized costs of the oxidation catalyst for VOC to be unjustifiable for this project.

   As mentioned above, actual VOC (and CO) emissions will likely be much less than permitted. Although this does not affect the cost calculations based on accepted estimating techniques, it does corroborate that, on a real basis, actual VOC control is not cost-effective.

3. *Additional DEP Action: The following condition has been added to Section II of the permit as Condition No. 9. The Department believes that this new condition will clarify and differentiate the expiration date of the permit and the physical construction expiration date of the proposed project.*

   Completion of Construction: The permit expiration date is April 30, 2003. Physical construction shall be complete by August 1, 2002. The additional time provides for testing, submittal of results, and submittal of the Title V permit to the Department.

CONCLUSION

The Final action of the Department is to issue the permit with the changes described above and to correct minor typographical errors.

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE:

Florida Power & Light Company
Fort Myers Power Plant
Post Office Box 430
Fort Myers, Florida 33905

Permit No.	0710002-009AC and PSD-FL-298
Project:	340 MW Simple Cycle Project
SIC No.	4911
Expires:	April 30, 2003

Authorized Representative:

William Reichel
Plant General Manager

PROJECT AND LOCATION:

Permit to install two dual fuel simple cycle units to generate additional power. Each unit is a 170-megawatt General Electric MS7241FA gas-fired combustion turbine-generator with an 80-foot stack. The project also includes two natural gas heaters with 30-foot stacks.

This facility is located at 10650 State Road 80 near Tice, Lee County. UTM coordinates are: Zone 17; 422.3 km E and 2,952.9 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 BD	BACT Determination

Howard L. Rhodes
Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

Currently, this facility generates electric power from two residual fuel oil-fired steam units with a combined generating capacity of 593 megawatts (MW) and 12 distillate fuel oil-fired simple cycle combustion turbines with a combined generating capacity of 708 MW. A permit was issued in 1998 to install six combined cycle units and ancillary equipment to replace the above mentioned existing residual oil-fired steam generating units (nominal 1500 MW Repowering Project).

The proposed new project is to install two simple cycle units with 80-foot stacks. Each unit is a 170-megawatt General Electric PG7241FA gas-fired combustion turbine-generator to be operated on a continuous basis (8760 hours per year). The project also includes two heaters with 30-foot stacks to heat the natural gas. Inherently clean fuels and good combustion practices will be employed to control all pollutants.

This project is subject to the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) only for volatile organic compounds (VOC) as discussed in the Technical Evaluation and Preliminary Determination dated October 26, 2000.

EMISSION UNITS

This permit addresses the following emission units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
027 – 028	Power Generation	Two Simple Cycle Combustion Turbine-Generators
029 - 030	Fuel Heating	Two Natural Gas Heaters

REGULATORY CLASSIFICATION

This facility, FPL Fort Myers Power Plant, 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/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (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).

This facility is a major source of hazardous air pollutants (HAPs) and is also subject to the provisions of Title IV, Acid Rain, Clean Air Act as amended in 1990.

PERMIT SCHEDULE

- 11/03/00 Notice of Intent published in the Fort Myers News-Press
- 10/26/00 Distributed Intent to Issue Permit
- 09/26/00 Application completed
- 08/10/00 Received Application

RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action, but not all are incorporated into this permit. These documents are on file with the Department.

- Application received on August 10, 2000
- Department's letter dated August 24, 2000
- Department's Intent to Issue and Public Notice Package dated October 26, 2000.
- EPA comments dated December 1, 2000.

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the *Permitting Authority*: Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114. All documents related to reports, tests, and notifications should be submitted to the *Compliance Authority*: DEP South District office, 2295 Victoria Avenue, Suite 364, Ft. Myers, Florida 33902-3381 and phone number 941/332-6975.

2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]

5. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Permit Expiration Date Extension: This permit expires on. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rule 62-4.080, F.A.C.].

8. PSD Approval to Construct Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

9. Completion of Construction: The permit expiration date is April 30, 2003. Physical construction shall be complete by August 1, 2002. The additional time provides for testing, submittal of results, and submittal of the Title V permit to the Department.

10. BACT Determination: In accordance with Rule 62-212.400(6)(b), F.A.C. (and 40 CFR 51.166(j)(4)), the Best Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a plant conversion. This paragraph states: "For phased construction project, the determination of best available control technology shall be reviewed and modified as appropriate at

the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." This reassessment will also be conducted for this project if there are any increases in heat input limits, hours of operation, oil firing, low or baseload operation (e.g. conversion to combined-cycle operation) short-term or annual emission limits, annual fuel heat input limits or similar changes. [40 CFR 51.166(j)(4) and Rule 62-212.400(6)(b), F.A.C.]

11. Application for Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Region 4 office of the U.S. Environmental Protection Agency in Atlanta, Georgia and a copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]

12. Title V Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for routine operation of the permitted emissions units. The permittee shall apply for and obtain a Title V operation permit in accordance with Rule 62-213.420, F.A.C. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSIONS AND CONTROLS

13. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

14. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

15. Excess Emissions Allowed and Prohibited: Refer to Section III, Specific Conditions 22-24. [Rule 62-210.700(4), F.A.C.]

16. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify the Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

17. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the combustion turbine and pollution control system in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as method of minimizing excess emissions. [Rule 62-4.070(3) F.A.C.]

TESTING REQUIREMENTS

18. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]

19. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

20. Applicable Test Procedures

    (a) *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]

    (b) *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

    (c) *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

21. Determination of Process Variables

    (a) *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. [Rule 62-297.310(5)(a), F.A.C.]

    (b) *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5)(b), F.A.C.]

22. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

23. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

RECORDS

24. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

REPORTS

25. Emissions Performance Test Results Reports: A report indicating the results of any required emissions performance test shall be submitted to the *Compliance Authority* no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.].

26. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the *Compliance Authority*: DEP's South District office by March 1st of each year. [Rule 62-210.370(2), F.A.C]

27. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) and 60.334 (2000 version), shall be submitted to the *Compliance Authority*: DEP's South District office.

APPLICABLE STANDARDS AND REGULATIONS:

1. Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable provisions of the Code of Federal Regulations Section 40, Parts 60, 72, 73, and 75.

2. Applicable Requirements: Issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law, notwithstanding that these applicable requirements are not explicitly stated in this permit. In cases where there is an ambiguity or conflict in the specific conditions of this permit with any of the above-mentioned regulations, the more stringent state, federal or local requirement applies. [Rules 62-204.800; 62-4.070(3), and Rule 62-210.300, F.A.C.]

3. NSPS Requirement - Subpart A: These emission units shall comply with all applicable provisions of 40CFR60, Subpart A, General Provisions including:
   - 40CFR60.7, Notification and Recordkeeping
   - 40CFR60.8, Performance Tests
   - 40CFR60.11, Compliance with Standards and Maintenance Requirements
   - 40CFR60.12, Circumvention
   - 40CFR60.13, Monitoring Requirements
   - 40CFR60.19, General Notification and Reporting requirements

4. NSPS Requirement - Subpart GG : ARMS Emission Units 027 and 028, Power Generation, consisting of two (nominal) 170 MW combustion turbines (340 MW in Simple cycle operation), shall comply with all applicable provisions of 40CFR60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not required to demonstrate compliance with non-NSPS permit standard(s).

5. Applicable Requirements for ARMS Emission Unit 029 and 030: Natural Gas Heater (s), shall comply with applicable specific conditions as stated below.

GENERAL OPERATION REQUIREMENTS AND CONTROL TECHNOLOGY

6. Fuels: Only pipeline natural gas (sulfur content of 2 grain per 100 standard cubic foot) and No. 2 Fuel oil (0.05% S content) or superior grade fuel oil shall be fired in these units.
[Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

7. Turbine Capacity: The maximum heat input rates, based on the lower heating value (LHV) of the fuel to *each* combustion turbine at compressor inlet conditions of 59°F, 60% relative humidity and 14.7 psia shall not exceed: 1,600 (gas-baseload), 1,680 [(gas-high power mode (HPM)], 1,811 (oil-baseload) million Btu per hour (mmBtu/hr).

This maximum heat input rate will vary depending upon turbine inlet conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other compressor inlet conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.
[Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

8. Gas-Fired Heaters. The maximum heat input rate, based on the lower heating value (LHV) of the fuel to the gas-fired heaters at ambient conditions of 59°F, 60% relative humidity, 100% load, and 14.7 psia shall not exceed 100 mmBtu per hour.

9. Simple Cycle Mode Operation Only: Each combustion turbine shall operate only in simple cycle mode. Any request to convert these units to combined cycle operation or increase the allowable hours of operation in any other mode of operation shall be approved by the Department through a permit modification in accordance with Chapters 62-210 and 62-212, F.A.C.
[Applicant Request; Rules 62-210.300 and 62-212.400, F.A.C.]

10. Alternate Gas Firing Methods of Operation: High Power Mode (HPM)

    a. Power Augmentation Mode: In accordance with the manufacturer's recommendations, steam may be injected into each combustion turbine when firing natural gas to provide additional peaking power during periods of high electrical power demand. Each unit shall not exceed 440 hours of power augmentation during any consecutive 12 months. To qualify as "power augmentation mode", the combustion turbine must operate at a load of 95% or greater than that of the manufacturer's maximum base load rate adjusted for the compressor inlet air conditions. Prior to activating and after deactivating the power augmentation mode, the operator shall log the date, time, and new mode of operation. Power augmentation when firing distillate oil is prohibited.

    b. High Temperature Peaking Mode: In accordance with the manufacturer's recommendations, each combustion turbine may be operated in a high temperature peaking mode when firing natural gas to provide additional power during periods of peak electrical power demands. Peaking is achieved through the automated gas turbine control system by allowing slightly higher exhaust temperatures, calculating a new combustion reference temperature for the peak load, and adjusting the fuel distribution between the fuel nozzles to maintain lean pre-mix firing. During the transfer from base load to peak load and during peak load operation, each unit will remain in the per-mix steady state mode. Each unit shall not exceed 60 hours of peaking during any consecutive 12 months. To qualify as "peaking mode", the combustion turbine must operate at a load of 95% or greater than that of the manufacturer's maximum base load rate adjusted for the compressor inlet air conditions. Prior to activating and after deactivating the peaking mode, the operator shall log the date, time, and new mode of operation. Peaking when firing distillate oil is prohibited.

11. Hours of Operation: Each unit is allowed to operate continuously or 8760 hours per year. However each unit is limited to 500 hours per year operation on 0.05 % S (by weight) fuel oil or superior grade oil and 500 hours on high power mode (HPM). [Design, Rules 62-4.070(3) and 62-210.200, F.A.C. (Definitions - Potential Emissions)]

12. Control Technology Dry Low NO_X: Dry Low NO_X (DLN) combustors shall be installed on each stationary combustion turbine to control nitrogen oxides (NO_X) emissions.

13. Emissions Performance Diagrams: The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions consistent with normal operation and maintenance practices and shall be maintained to minimize NO_X and CO emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion-firing mode shall be minimized when firing natural gas. [Rule 62-4.070, and 62-210.650 F.A.C.]

14. Control Technology Wet Injection: A wet injection system shall be installed for use when firing No. 2 or superior grade distillate fuel oil for control of NO_X emissions. [Design, Rules 62-4.070 F.A.C.]

EMISSIONS LIMITS AND STANDARDS

15. Following are the emission limits determined for this project assuming full load. Values for NO_X are corrected to 15% O_2 on a dry basis. These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are followed by the applicable specific conditions. [Applicant Requests, Rules 62-204.800(7)(b) (Subparts GG), 62-210.200 (Definitions-Potential Emissions), F.A.C.].

POLLUTANT	CONTROL TECHNOLOGY	EMISSION LIMIT
NO_X	Dry Low NO_X for Natural Gas Wet Injection and limited Fuel Oil usage	10.5 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 42 ppmvd (Fuel Oil)
PM/PM_{10}, VE	Pipeline Natural Gas, Low Sulfur Fuel Oil	10/17 lb/hr (Gas/Fuel Oil) 10 percent Opacity (Gas/Fuel Oil)
VOC (BACT)	As Above	1.5 ppmvd (Gas) 3.5 ppmvw (Fuel Oil)
CO	As Above	9 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 20 ppmvd (Fuel Oil)
SO_2 and Acid Mist	As Above	2 gr S/100 ft^3 (in Gas) 0.05% S (in Fuel Oil)

HPM: High Power Modes – (High Temperature Peaking or Steam Power Augmentation)

16. Nitrogen Oxides (NO_X) Emissions:

a. *Gas Firing Base Case:* The concentration of NO_X concentrations in the exhaust gas of each combustion turbine (CT) shall not exceed 10.5 ppmvd at 15%O_2 on a 30-day rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 10.5 ppmvd @15% O_2 nor 69 lb/hr to be demonstrated by stack test as required in Specific Conditions 25 to 30.

b. *Gas Firing High Power Modes (HPM):* The concentration of NO_X concentrations in the exhaust gas of each CT shall not exceed 15 ppmvd at 15%O_2 on a 24-hour rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 15 ppmvd @15% O_2 nor 102 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to30.

c. *Fuel Oil Firing Operation:* The concentration of NO_X concentrations in the exhaust gas of each CT shall not exceed 42 ppmvd at 15% O_2 on a 24-hour rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 42 ppmvd @15% O_2 nor 320 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

d. *Gas Fired Heaters:* NO_X emission limit from each gas heater shall not exceed 0.10 lb/mmBtu to be demonstrated by stack test as required in Specific Condition 25 to 30.

17. Visible Emissions (VE): VE emissions from each turbine shall not exceed 10 percent opacity while operating in gas or fuel oil. Visible emissions from the gas heaters shall not exceed 10 percent opacity. Stack test shall be conducted as required in Specific Condition 25 to 30.

18. Particulate Matter (PM/PM_{10}): PM/PM_{10} emissions shall not exceed 10 lb/hr when operating on natural gas and shall not exceed 17 lb/hr when operating on fuel oil. [Rule 62-4.070 (3) F.A.C]. Stack test shall be conducted as required in Specific Condition 25 to 30.

19. Carbon Monoxide (CO) emissions :

a. *Gas Firing Base Case:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 9 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 9 ppmvd nor 29 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 29.

b. *Gas Firing High Power Mode (HPM) Operation:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 15 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 15 ppmvd nor 48 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

c. *Fuel Oil Firing:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 20 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 20 ppmvd nor 65 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

d. *Gas Fired Heaters:* CO emission limit from each gas heater shall not exceed 0.075 lb/mmBtu to be demonstrated by stack test as required in Specific Condition 25 to 30.

20. Volatile Organic Compounds (VOC) Emissions: The concentration of VOC in the exhaust gas shall not exceed 1.5 ppmvd (gas) 3.5 ppmvw (oil) as determined by EPA Methods 18, 25 or 25 A. VOC emissions (at ISO conditions) shall not exceed 2.8 (gas), 7.3 (oil) lb/hr per CT to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

21. Sulfur Dioxide (SO_2) and Sulfuric Acid Mist (SAM) Emissions: SO_2 and SAM emissions shall be limited by firing pipeline natural gas (sulfur content less than 2 grain per 100 standard cubic foot) or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur. [40CFR60 Subpart GG and Rules 62-4.070, and 62-204.800(7), F.A.C.]

EXCESS EMISSIONS

22. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration. Operation below 50% output shall be limited to two hours in any 24-hour period, regardless of unit cycles (breaker closed to breaker open) [Rules 62-210.700, 62-4.130 F.A.C.].

23. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, power augmentation, high temperature peaking or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. All such emissions shall be included in the 30-day rolling average (gas-base case) or the 24-hr average (oil or HPM) to demonstrate compliance with the continuous NO_X standard. [Rules 62-210.700 (4) F.A.C.].

24. Excess Emissions Report: If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's South District office within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition No. 15 and 16. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (2000 version)].

COMPLIANCE DETERMINATION

25. Test Compliance Schedule: Compliance tests 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, and annually thereafter as indicated in this permit or as required by the *Compliance Authority*. [40CFR 60.8 and Rule 62-4.070(3) F.A.C.]

26. Initial Performance and Annual Compliance Tests: Initial (I) performance tests (for both fuels)for each unit shall be conducted as indicated in Specific Conditions 29 and 30. Annual (A) compliance tests for each unit shall be conducted during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on each CT as indicated in Specific Conditions 29 and 30. Where *initial test only* are indicated, these tests shall be repeated prior to renewal of each operation permit.

27. Test After Substantial Modifications: Initial tests for each unit shall also be conducted after any substantial modifications and appropriate shake down period of air pollution control equipment such as change or tuning of combustors. Shakedown periods shall not to exceed 100 days after re-starting the combustion turbine. This does not apply to routine maintenance. [Rules 62-297.310(7)(a)4 and 62-4.070(3), F.A.C.]

28. Tests Prior to Permit Renewal: Prior to renewing air operation permits, performance tests shall be conducted for each combustion turbine to demonstrate compliance with the CO, NO_X, PM, VOC and visible emissions standards for normal gas firing, gas firing with power augmentation, gas firing with high temperature peaking, and backup oil firing. Tests for CO, NO_X, and VOC emissions shall be

conducted concurrently. Tests for PM and visible emissions shall be conducted concurrently. All tests shall be conducted within the 12 months prior to renewing the air operation permit.
[Rule 62-297.310(7)(a)3., F.A.C.]

29. Test Methods: The following reference methods as described in 40 CFR 60, Appendix A (2000 version), and adopted by reference in Chapter 62-204.800, F.A.C., shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing pursuant to Rule 62-297.310 (6), F.A.C.

- EPA Reference Method 5 or 17. "Determination of Particulate Emissions from Stationary Sources" (I)
- Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test data may be used to demonstrate compliance for annual (A) test requirements.
- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).
- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).
- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60 Subpart GG.
- EPA Reference Method 18, 25 or 25A, "Determination of Volatile Organic Concentrations." Initial test only.
- EPA Reference Method 19. "Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates". Method 19 shall be used only for the calculation of lb/mmBtu and 40CFR75 shall be used to calculate mmBtu/hr and lb/hr emissions rates from stack tests. Initial test only.

30. Combustion Turbine Testing Capacity Procedures:

a. *Initial performance tests* shall be conducted in accordance with 40CFR 60.8 and 40 CFR60.335 for pollutants subject to New Source Performance Standards (NSPS) in Subpart GG for gas turbines.

b. *Other required performance tests* for compliance with standards specified in this permit shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. compressor inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for compressor inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204 and 62-297 F.A.C.

c. *For higher operating mode performance tests* conducted when gas firing under the power augmentation mode and under the high temperature peaking mode, the permittee shall document that the combustion turbine was operating under "peak load" for the given ambient conditions. For power augmentation, the steam injection rate shall be no less than 100,000 pounds of steam per hour.

[Rule 62-297.310(2), F.A.C.; 40 CFR 60.335]

31. Compliance with the SO_2 and PM/PM_{10} emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas as the primary fuel and restricted use of No.2 distillate oil (or superior grade) is the method for determining continuous compliance for SO_2 and PM/PM_{10}. Initial PM and upon permit renewal tests are required. VE shall serve as a surrogate for PM/PM_{10} annual compliance test. Test for PM and visible emissions shall be conducted concurrently.

32. Test Methods for Natural Gas and Fuel Oil Sulfur Content: For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard, ASTM D 2880-71(or equivalent) for sulfur content of liquid fuel and ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel and shall be utilized in accordance with the EPA-approved custom fuel monitoring schedules. Natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be submitted when demonstrating compliance for this fuel. However, the applicant is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used when determination of fuel sulfur content is made. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (2000 version)

33. Compliance with Visible Emissions (VE) limits: Initial and annual tests are required for visible emissions. Test for PM and visible emissions shall be conducted concurrently.

34. Compliance with CO emission limits: An initial test for CO, shall be conducted concurrently with the initial VOC and NO_X tests while operating at permitted capacity. These initial VOC, NO_X and CO test results shall be the average of three runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual NO_X RATA testing which is performed pursuant to 40 CFR 75.

35. Compliance with the VOC emission limits: Initial and permit renewal compliance stack tests are required to demonstrate compliance with the VOC emission limits. CO emission limits and periodic tuning data will be employed as a surrogate and no annual testing is required.

36. Compliance with the NO_X limits: Compliance with the NO_X emissions limits shall be determined by stack tests and a CEMS as specified in specific conditions No. 29, 44, and 45.

NOTIFICATION, REPORTING, AND RECORDKEEPING

37. Notifications: All notifications and reports required by any applicable requirements of 40 CFR Subpart A and GG shall be submitted to the DEP's South District office.

38. Reports and Records: These units facility shall also comply with all the record and report requirements specified in Section II, Specific Conditions No 24 through 27.

39. Monthly Operations Record Summary: By the fifth calendar day of each month, the permittee shall record the hours of each mode of operation and the fuel consumption for each combustion turbine. The information shall be recorded in a written or electronic log and shall summarize the previous month of operation and the previous 12 months of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request from the DEP South District Office. [Rule 62-4.160(15), F.A.C.]

40. Fuel Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a The permittee shall obtain data sheets from the vendor indicating the average sulfur content of the natural gas being supplied by the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or equivalent methods as specified in Specific Condition 32.

    b The permittee shall obtain data sheets from the vendor indicating the quantity and sulfur content of the distillate oil for each shipment delivered. Methods for determining the sulfur content of distillate oil shall be ASTM D 2880-71 or equivalent methods as specified in Specific Condition 32.

MONITORING REQUIREMENTS

41. Continuous Monitoring System Procedures: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the NO_X emissions from each CT. Each device shall properly function prior to the initial performance tests and comply with the applicable monitoring system requirements of 40 CFR 75.62. Upon request from DEP, the CEMS emission rates for NO_X on each CT shall be corrected to ISO conditions to demonstrate compliance with the NO_X standard established in 40 CFR 60.332.
[Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 62-4.130, F.A.C and 40CFR75]

42. Continuous Monitoring Certification and Quality Assurance Requirements: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40CFR75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62

43. Continuous Monitoring System Operation: The continuous monitoring systems (CEMS) for NO_X shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Valid hourly emission rates shall not include periods of startup, shutdown, or malfunction unless prohibited by 62-210.700 F.A.C. These excess emissions periods shall be reported as require in Specific Conditions 24 and 46. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 60.13, 40 CFR 75]

44. Continuous Compliance with the NO_X Emission Limits – *Base Case Operation*: Continuous compliance with the NO_X emission limits shall be demonstrated with the CEM system based on a 30-day rolling average. Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new 30 day average emission rate is calculated from the arithmetic average of all valid hourly emission rates during the previous 30 operating days. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 75]

45. Continuous Compliance with the NO_X Emission Limits - *Alternate Methods of Operation*:. Each 1-hour monitoring average consisting of any data collected during an alternate method of operation (*oil firing, power augmentation, or peaking*) shall be attributed entirely to the alternate method of operation. For each 24-hour average consisting of more than one method of operation, compliance shall be determined by prorating each emission standard based on the number of 1-hour averages represented. In event of a CEMS malfunction or occurrence of excess emissions while operating in the power augmentation or peaking modes, the permittee shall immediately cease power augmentation or peaking and revert to normal gas firing or shut down the combustion turbine. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 75]

46. CEMS for Reporting Excess Emissions: The NO_X CEMS may be used in lieu of the requirement for reporting excess emissions in 40 CFR 60.334(c)(1), Subpart GG (2000 version). Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). Periods when NO_X emissions (ppmvd @ 15 % oxygen) are above the permit limits listed in Specific Conditions 15 and 16, shall be reported to the DEP South District office as required in Specific Condition 24.

47. CEMS in lieu of Water to Fuel Ratio: The NO_X CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (2000 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (2000 version) will be replaced by the 40 CFR 75 certification tests of the NO_X CEMS.

48. Natural Gas Monitoring Schedule: The following custom monitoring schedule for natural gas is approved in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2):

- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative (DR), that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- Each unit shall be monitored for SO_2 emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

49. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

FPL Ft Myers 340 MW Simple Cycle Project
PSD-FL-298 and 0710002-009-AC
Lee County, Florida

BACKGROUND

Florida Power & Light Company (FPL) proposes to install two nominal 170-megawatt combustion turbine-generators. The units will be permitted to operate continuously while firing natural gas. The units will operate in power augmentation or peaking modes (high power modes – HPM) for 500 hours per year and will burn fuel oil during 500 hours per year.

The project will result in a significant increase of volatile organic compounds (VOC) per Table 62-212.400-2, F.A.C. Therefore a determination of Best Available Control Technology is required for this pollutant.

DATE OF RECEIPT OF A BACT APPLICATION:

The application was received on August 10, 2000 and included a proposed BACT- VOC analysis prepared by the applicant's consultant, Golder Associates Inc.

REVIEW GROUP MEMBERS:

A. A. Linero, P.E., and Teresa Heron, Permit Engineer

BACT DETERMINATION REQUESTED BY THE APPLICANT:

The applicant has proposed good combustion practices to control VOC to 1.5 ppmvd while firing natural gas and 3.5 ppmvw when firing distillate oil.

According to the application, total annual emissions of VOC are expected to be approximately 62 TPY from the project.

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.
- All scientific, engineering, and technical material and other information available to the Department.
- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT DETERMINATION BY THE DEPARTMENT

Volatile organic compound (VOC) emissions, like CO emissions, are formed due to incomplete combustion of fuel. The combustion turbine, particularly with the very high firing temperatures characteristic of the F-Class technology, is very efficient at destroying VOC.

The applicant has proposed good combustion practices to control VOC to 1.5 ppmvd while firing natural gas and 3.5 ppmvw when firing distillate oil. The limit for gas firing is equal to the lowest BACT-based VOC limit known to the Department. Further reduction by installation of oxidation catalyst was not determined to be cost-effective based on the applicant's estimate of $60,000 per ton of VOC removed (assuming a 90% percent control efficiency).

The limit for the limited oil firing case is consistent with levels established as BACT. According to GE, even lower VOC emissions were achieved during recent tests of the DLN-2.6 technology when firing natural gas.[1] This was recently confirmed by tests during which values between 0.1 and 0.5 ppmvd were measured at operating loads between and including 50 and 100 percent.[2] The Department accepts FPL's VOC proposal as BACT for this project.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Teresa Heron, Project Review Engineer, New Source Review Section
A. A. Linero, P.E. Administrator, New Source Review Section 12/18/00
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

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

Date: 12/20/00

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date: 12/21/2000

References

1 Telecom. Vandervort, C., GE, and Linero, A. A., DEP. VOC Emissions From FA Gas Turbines with DLN-2.6 Combustors.

2 Report. Cubix Corp. Emissions from a GE PG7241 Natural Gas-fired Simple Cycle Combustion Turbine at TECO Polk Power Station. September 2000.

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a) Have access to and copy and records that must be kept under the conditions of the permit;
b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a) A description of and cause of non-compliance; and
b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

a) Determination of Best Available Control Technology for VOC only;
b) Determination of Prevention of Significant Deterioration non-applicablity for other pollutants; and
c) Compliance with New Source Performance Standards.

G.14 The permittee shall comply with the following:

a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

RECEIVED
DEC 21 2000
BUREAU OF AIR REGULATION

December 19, 2000

Mr. C. H. Fancy, P.E., Chief Bureau of Air Regulation
Florida Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

Attention: Mr. A. A. Linero, P.E., Administrator of New Source Review Section

RE: COMMENTS TO DRAFT PERMIT
FLORIDA POWER & LIGHT COMPANY
TWO 170 MW SIMPLE CYCLE GAS TURBINES
DEP FILE NO. 0710002-009-AC (PSD-FL-298)

Dear Al:

This correspondence is submitted to provide comments to the Draft Permit for the above referenced project. The comments on the Draft Permit are presented below.

Section III. Specific Condition 8. Gas-Fired Heaters: The maximum heat input for the gas fired heaters will be 24 mmBtu/hr as stated in the permit application. In addition, the ambient conditions are not applicable to the heat input to the heaters. The conditions should be worded as follows: "The maximum heat input rate is 24 mmBtu/hr and the only fuel shall be natural gas."

Section III. Specific Conditions 16. d. and 19. d. Gas-Fired Heaters: Since both gas-fired heaters are identical and the emission rates are relatively low, it is requested that the Department consider a requirement of testing on only one of these two units or identical unit at the plant site. With the Repowering Project there will also be gas-fired heaters when the units are operated in simple cycle mode. In addition, it is requested that once compliance is demonstrated that the Department considers only requiring a compliance test prior to obtaining an operation permit. This suggestion is consistent with Rule 62-297.310(7)4.b. F.A.C., which only requires testing if the emission unit has the potential to emit 100 tons/year or more. If acceptable to the Department, the following sentence is offered for consideration and could be added at the end of each condition: "An initial compliance test shall be conducted on one of the gas heaters or another identical gas heater at the plant site, which is selected at random. If compliance is demonstrated, testing is not required on the remaining gas heaters associated with this permit. Thereafter, compliance testing shall be performed on one of the gas heaters or another identical gas heater (selected at random) prior to obtaining renewal of an air operating permit."

The opportunity to provide these comments is appreciated. Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky

Kennard F. Kosky, P.E.
Principal

KFK/jkw

cc: Rich Piper, FPL
Bernie Tibble, FPL
Teresa Heron, FDEP-BAR
C. Carlson

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D. Knowles, SP
EPA
NPS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

RECEIVED
DEC 08 2000
BUREAU OF AIR REGULATION

DEC 01 2000

4 APT-ARB

A. A. Linero, P.E.
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Preliminary Determination and Draft PSD Permit for FPL - Fort Myers Plant (PSD-FL-298) located in Lee County, Florida

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft prevention of significant deterioration (PSD) permit for FPL - Fort Myers Plant dated October 26, 2000. The preliminary determination is for the proposed construction and operation of two simple cycle combustion turbines (CTs) with a total nominal generating capacity of 340 MW to be located near Tice, FL. The combustion turbines proposed for the facility are General Electric (GE), frame 7FA units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CTs will be allowed to fire natural gas up to 8,760 hours per year and fire No. 2 fuel oil a maximum of 500 hours per year. The CTs will be allowed to operate in high power modes (power augmentation or peaking) for a maximum of 500 hours/year. Total net emissions increases from the proposed project are above the thresholds requiring PSD review for volatile organic compounds (VOC).

Based on our review of the PSD permit application, preliminary determination and draft PSD permit, we have the following comments:

1. We suggest you verify the independence of this simple cycle combustion turbine project from the previous combined cycle combustion turbine project already permitted, but not yet under construction, at the FPL - Fort Myers Plant. As part of the verification, please assess whether hazardous air pollutant emissions from the combined cycle and simple cycle combustion turbines should be added together to evaluate the potential applicability of 112(g) case-by-case maximum achievable control technology requirements.

2. The "Direct Annual Costs" section of the catalytic oxidation cost analysis lists an "Inventory Cost" (capital recovery for 1/3 catalyst) of \$28,548/year. This figure is included in the economic analysis in addition to the "Catalyst Cost" of \$224,667/year, which is already included in the "Direct Annual Costs" section of the economic analysis. Additionally, The Annualized Total Direct Capital figure of \$176,070/year includes the capital recovery of the

initial catalyst cost ($780,000) which is listed in the Direct Capital Costs section. Information should be provided in order to evaluate the need for both costs and verify that catalyst costs and capital recovery of the catalyst are not being double-counted.

Thank you for the opportunity to comment on the FPL - Fort Myers Plant preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,

Douglas Neeley

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

DEC 01 2000

4 APT-ARB

A. A. Linero, P.E.
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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Thank you for the opportunity to comment on the FPL - Fort Myers Plant preliminary determination and draft PSD permit. If you have any questions regarding these comments, please direct them to either Katy Forney at 404-562-9130 or Jim Little at 404-562-9118.

Sincerely,

Douglas Neeley

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

cc: [illegible]
C. Carlson
D. Knowles, SD
K. Kosty, Bolder
NPS

FPL

P.O. Box 430, Ft. Myers, FL 33902-0430

RECEIVED

NOV 09 2000

BUREAU OF AIR REGULATION

November 6, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7000 0520 0012 3152 5186

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

RE: FORT MYERS PLANT
SIMPLE CYCLE GE FRAME 7A COMBUSTION TURBINES

Dear Mr. Linero;

Enclosed please find the **Affidavit of Publication** of the **Intent to Issue an Air Construction Permit** for the Florida Power & Light Company Fort Myers Plant. This notice was published in the Fort Myers News-Press on November 3, 2000. If you have any questions, please contact me at (941) 693-4390. Thank You!

Sincerely,

Bernie Tibble
Bernie Tibble

cc: J. Kearn
C. Carlson
O. Knowles, SD
G. Worley, EPA
J. Bunyak, NPS

NEWS-PRESS

Published every morning – Daily and Sunday
Fort Myers, Florida

Affidavit of Publication

STATE OF FLORIDA
COUNTY OF LEE

Before the undersigned authority, personally appeared
Kieanna Henry
who on oath says that he/she is the
Asst. Legal Clerk of the News-Press, a daily newspaper, published at Fort Myers, in Lee County, Florida; that the attached copy of advertisement, being a
Legal Notice
in the matter of **DEP Air Construction Permit to Fla Power & Light**
in the ______________________ Court
was published in said newspaper in the issues of
November 3, 2000

Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County, Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisement; and affiant further says that he/she 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.

Kieanna Henry

Sworn to and subscribed before me this

3rd day of Novmeber 2000 by

Kieanna Henry
personally known to me or who has produced

____

as identification, and who did or did not take an oath.

Notary Public Brenda Leighton

Print Name ______________________

My commission Expires:

Brenda Leighton
MY COMMISSION # CC808905 EXPIRES
February 14, 2003
BONDED THRU TROY FAIN INSURANCE

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0710002-009-AC (PSD-FL-298)
Florida Power & Light Fort Myers Plant
340 Megawatt Simple Cycle Project
Lee County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality to Florida Power & Light Company (FPL). The permit is to construct two 170 megawatt (MW) natural gas and distillate fuel oil-fired combustion turbine-electrical generators with 80-foot stacks and natural gas heaters at the Fort Myers Plant near Tice, Lee County. A Best Available Control Technology (BACT) determination was required only for emissions of volatile organic compounds (VOC) 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 33902.

The new units will be nominal 170 MW General Electric PG7241FA combustion turbines-electrical generators operating in simple cycle. Each unit will be permitted to operate 8,760 hours per year while firing natural gas. Within the 8,760 hours, each unit will be permitted to burn maximum 0.05 percent sulfur distillate fuel oil for 500 hours and to operate in high power modes (peaking or power augmentation) for 500 hours.

The BACT emission limits for VOC are 1.5 parts per million, dry (ppmvd), when burning gas and 3.5 ppmv, wet, when burning fuel oil. A BACT determination was not required for the other key pollutants such as nitrogen oxides NOX), carbon monoxide (CO), particulate matter (PM/PM10), sulfuric acid mist (SAM), and sulfur dioxide (SO2). Emissions of the non-BACT pollutants will be controlled to low levels by use of inherently clean fuels, combustion techniques such as Dry Low NOX, or wet injection.

The maximum potential annual emissions in tons per year (tpy) are summarized below. Because of an ongoing repowering project involving shut down of existing residual oil-fired units, there will be net contemporaneous emission reductions for all pollutants except VOC and CO. PSD review was required only for VOC.

Pollutants; Project In-

AFFIDAVIT OF PUBLICATION

NEWS-PRESS
"Serving Southwest Florida Since 1884"

creases (tpy); Contemporaneous Changes (tpy); Net Changes (tpy)

PM/PM10; 91; -293; -202
SAM; 4; -894; -890
SO2; 91; -20,400; -20,309
NOX; 741; -5,217; -4,476
VOC; 26; 36; 62
CO; 280; -238; 42

Ambient air pollutant concentration increases caused by the simple cycle project, irrespective of the repowering project, will be less than the applicable 'significant impact levels.'

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 and requests for public meetings 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.' 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.

This Fort Myers 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 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)488-0114 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. The Department's technical evaluations and Draft Permit can be viewed at **www.dep.state.fl.us/air/permitting.htm** by clicking on Construction Permits.

Nov 3 No. 54202

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

October 26, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
Mr. William Reichel, General Manager
FPL Fort Myers Plant
Post Office Box 430
Fort Myers, Florida 33905

Re: DEP File No. 0710002-009-AC (PSD-FL-298)
340 MW Simple Cycle Combustion Turbine Project

Dear Mr. Reichel:

Enclosed is one copy of the Draft Air Construction Permit and the Technical Evaluation and Preliminary Determination 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 Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" 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 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 or Mr. Linero 850/921-9523.

Sincerely,

A. A. Linero P.E. 10/26

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

CHF/th

Enclosures

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 1453 1583

Article Sent To:
Mr. William Reichel, Gen. Mgr.

Postage	$	10/26/00 FPL, Ft. Myers Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	$	

Name (Please Print Clearly) (to be completed by mailer)
Mr. William Reichel, Gen. Mgr
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+4
Ft. Myers, FL 33905

PS Form 3800, July 1999 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. William Reichel, Gen. Mgr.
FPL Fort Myers Plant
PO Box 430
Ft. Myers, FL 33905

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 1583

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*
B. Date of Delivery 10-31-00

C. Signature
X Mary K. Russell
☐ ~~Agent~~
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

P.E. Certification Statement

Permittee: **DEP File No.** 0710002-009-AC

Florida Power & Light Company
FPL Fort Myers Plant
Lee County

Project type:

Project is construction of two 170-megawatt GE PG7241FA gas and oil-fired simple cycle combustion turbine-electrical generators with 80-foot stacks and gas heaters. Units will be permitted to operate (continuously) 8760 hours per year of which 500 hours per unit may be on No. 2 distillate fuel oil and 500 hours may be at high power modes.

Because of contemporaneous emissions reductions from an on-going repowering project at the site, the proposed project "nets out" of PSD for all pollutants except VOC. The BACT emission limits for VOC are 1.5 ppmvd while firing natural gas and 3.5 ppmvw while firing fuel oil. The continuous (30-day) NO_X limits are 10.5 ppmvd when operating on natural gas and 42 ppmvd by wet injection when burning fuel oil. Other pollutants, including particulate matter (PM/PM_{10}), carbon monoxide, volatile organic compounds, sulfur dioxide, and sulfuric acid mist will be controlled by good combustion and use of clean fuels.

Ambient air pollutant concentration increases caused by the project will be less than the respective "significant impact levels." Impacts due to the proposed project together with the repowering project all favorable and the net effect is a "creation of available SO_2 and NO_X increment" in the PSD Class I (Everglades) and Class II areas.

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

A. A. Linero 10/26/00

A. A. Linero, P.E. Date
Registration Number: 26032

Bureau of Air Regulation
New Source Review Section
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 921-9523
Fax (850) 922-6979

aaf 10/26

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. 0710002-009-AC and PSD-FL-298
340 MW Simple Cycle Combustion Turbines Project
Lee County

_______________________________________/

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (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 August 10, 2000 to the Department to install two simple cycle gas and oil-fired simple cycle units and auxiliary equipment at the Fort Myers Plant near Tice, Lee 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 is required to perform proposed work.

The Department intends to issue this air construction permit 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. 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. 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 and requests for public meetings concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of Public Notice of Intent to Issue Air Permit. 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 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.

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.

A. A. Linero P.E.

for 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 (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 10/26/00 to the person(s) listed:

William Reichel, FPL*
Richard Piper, FPL
Ron Blackburn, DEP SD
Doug Neeley, EPA
John Bunyak, NPS
Chair, Lee County Commission*
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.

Charlotte J. Hayes 10/26/00
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0710002-009-AC (PSD-FL-298)

Florida Power & Light Fort Myers Plant
340 Megawatt Simple Cycle Project
Lee County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality to Florida Power & Light Company (FPL). The permit is to construct two 170 megawatt (MW) natural gas and distillate fuel oil-fired combustion turbine-electrical generators with 80-foot stacks and natural gas heaters at the Fort Myers Plant near Tice, Lee County. A Best Available Control Technology (BACT) determination was required only for emissions of volatile organic compounds (VOC) 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 new units will be nominal 170 MW General Electric PG7241FA combustion turbines-electrical generators operating in simple cycle. Each unit will be permitted to operate 8,760 hours per year while firing natural gas. Within the 8,760 hours, each unit will be permitted to burn maximum 0.05 percent sulfur distillate fuel oil for 500 hours and to operate in high power modes (peaking or power augmentation) for 500 hours.

The BACT emission limits for VOC are 1.5 parts per million, dry (ppmvd), when burning gas and 3.5 ppmv, wet, when burning fuel oil. A BACT determination was not required for the other key pollutants such as nitrogen oxides NO_X), carbon monoxide (CO), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), and sulfur dioxide (SO_2). Emissions of the non-BACT pollutants will be controlled to low levels by use of inherently clean fuels, combustion techniques such as Dry Low NO_X, or wet injection.

The maximum potential annual emissions in tons per year (tpy) are summarized below. Because of an ongoing repowering project involving shut down of existing residual oil-fired units, there will be net contemporaneous emission reductions for all pollutants except VOC and CO. PSD review was required only for VOC.

Pollutants	Project Increases (tpy)	Contemporaneous Changes (tpy)	Net Changes (tpy)
PM/PM_{10}	91	-293	-202
SAM	4	-894	-890
SO_2	91	-20,400	-20,309
NO_X	741	-5,217	-4,476
VOC	26	36	62
CO	280	-238	42

Ambient air pollutant concentration increases caused by the simple cycle project, irrespective of the repowering project, will be less than the applicable "significant impact levels."

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 and requests for public meetings 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." 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.

This Fort Myers 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 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.

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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. The Department's technical evaluations and Draft Permit can be viewed at www.dep.state.fl.us/air/permitting.htm by clicking on Construction Permits.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

(Including Draft BACT Determination)

Florida Power & Light Company

Fort Myers Power Plant
340 Megawatt Simple Cycle Project
Lee County

DEP File No. 0710002-009-AC (PSD-FL-298)

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

October 26, 2000

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

Florida Power & Light Company (FPL)
Fort Myers Power Plant
Post Office Box 430
Fort Myers, Florida 33905

Authorized Representative: William Reichel, Plant General Manager

1.2 Reviewing and Process Schedule

08-10-00: Date of Receipt of Application
09-26-00: Application completed
xx-xx-00: Intent Issued

2. FACILITY INFORMATION

2.1 Facility Location

Refer to Figures 1 and 2 below. The FPL Fort Myers Plant is located on 460 acres, north of State Road 80 and approximately 2.5 miles east of Tice, Lee County. This site is approximately 97 kilometers from Everglades National Park, a Class I PSD Area. The UTM coordinates of this facility are Zone 17; 422.3 km E; 2,952.9 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

2.3 Facility Category

The FPL Fort Myers Plant (Figure 3) generates electric power from two residual fuel oil-fired steam units with a combined generating capacity of 593 megawatts (MW) and 12 distillate fuel oil-fired simple cycle combustion turbines with a combined generating capacity of 708 MW. Six natural gas-fired combined cycle units are presently under construction. These will replace the two residual fuel oil-fired units and will repower the existing electrical generators associated with those units. The on-going project will increase the nominal capacity of the plant from 1305 MW to approximately 2208 MW.

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). Per Table 62-212.400-2, modifications at the facility resulting in emissions increases greater than 40 TPY of NO_X or SO_2, 25/15 TPY of PM/PM_{10}, 7 TPY of SAM or 3 TPY of fluorides (F) require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

The facility is also 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/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY.

Figure 3 – Existing Residual Oil Fired Units to be Replaced

3. PROJECT DESCRIPTION

This permit addresses the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
027 - 028	Power Generation	Combustion Turbine- Electrical Generators
029 - 030	Fuel Heating	Natural Gas Heater(s)

FPL proposes to construct two nominal 170 MW dual fuel simple cycle combustion turbine-electrical generators. An 80-foot stack will be installed for each combustion turbine. Two nominal 100 million Btu per hour (mmBtu/hr) natural gas fired heaters with 30-foot stacks will be included as part of this project.

The two proposed simple cycle turbines will be installed in addition to six combined cycle units permitted in 1998. Under the presently authorized project, the existing residual oil-fired units will cease operation on August 1, 2001, by which time the combined cycle units will be fully operational. The two simple cycle units are proposed to start up in late 2002.

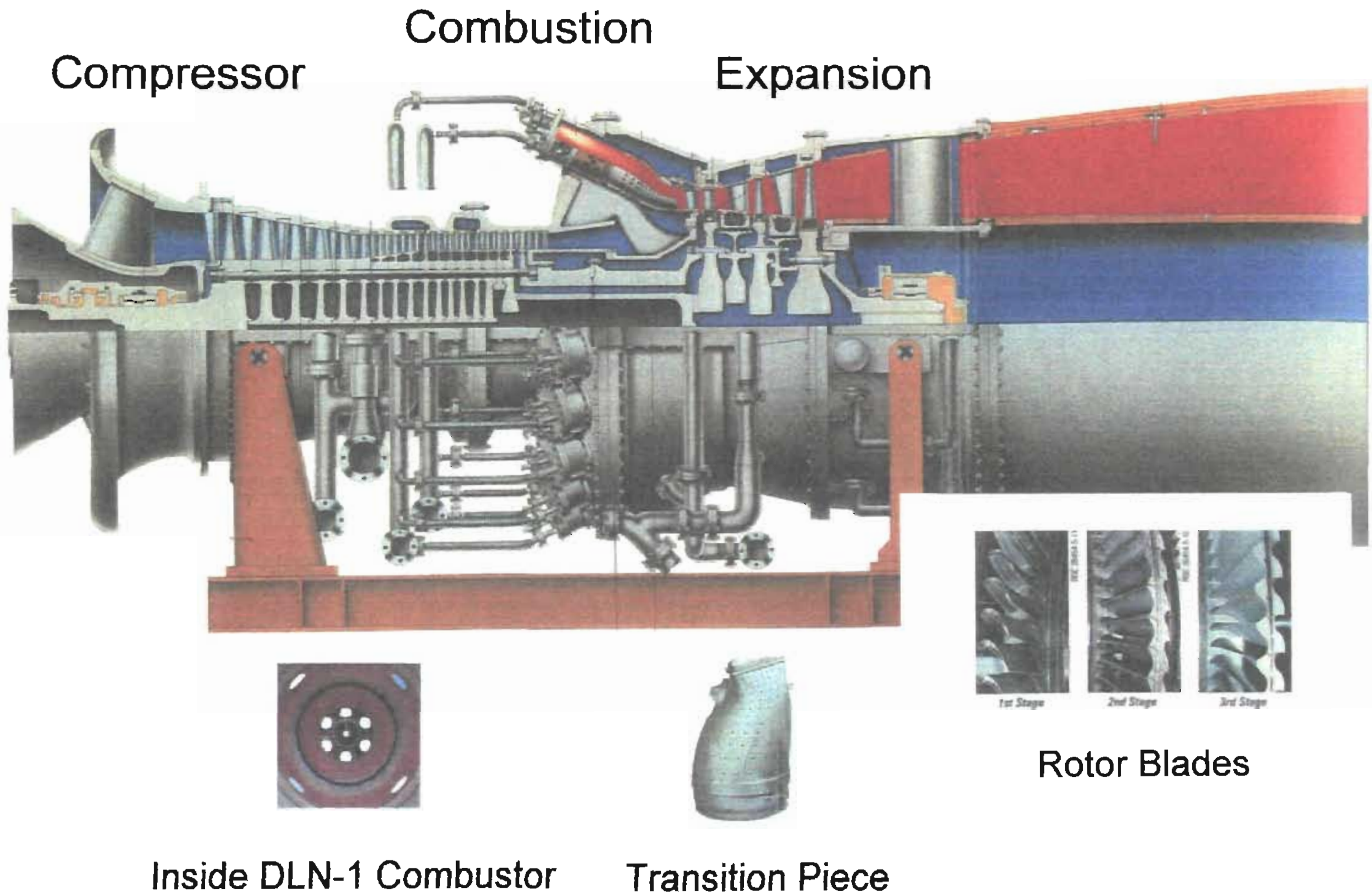
Emissions increases due to the simple cycle project will occur. Estimated emissions are 280 tons per year of CO, 91 TPY of SO_2, 4 TPY of sulfuric acid mist (SAM), 91 TPY of PM/PM_{10}, 741 TPY of NO_X, and 26 TPY of VOC. Although emissions of all pollutants other than VOC will be greater than the significant emission rates (per Table 62-212.400-2, F.A.C., only VOC is subject to PSD review. The reasons are discussed below.

4. PROCESS DESCRIPTION

A gas turbine is an internal combustion engine that operates with rotary rather than reciprocating motion. Ambient air is drawn into the 18-stage compressor of the GE 7FA where it is compressed by a pressure ratio of about 15 times atmospheric pressure. The compressed air is then directed to the combustor section, where fuel is introduced, ignited, and burned. The combustion section consists of 14 separate can-annular combustors.

The key components of the GE MS 7001FA (a predecessor of the PG 7241FA) are identified in Figure 4 (Source GE brochures). An exterior view is also shown. Figure 5 is a photograph (source: GE website) of the internal components as viewed from the compressor section. Each unit will be delivered with the 14 can-annular design, DLN-2.6 combustors instead of the earlier-generation combustors supplied with the MS7001FA.

Flame temperatures in a typical combustor section can reach 3600 degrees Fahrenheit (°F). Units such as the 7FA operate at lower <u>flame</u> temperatures that minimize NO_X formation. The hot combustion gases are then diluted with additional cool air and directed to the turbine section at temperatures of approximately 2400 °F. Energy is recovered in the turbine section in the form of shaft horsepower, of which typically more than 50 percent is required to drive the internal compressor section. The balance of recovered shaft energy is available to drive the external load unit such as an electrical generator.



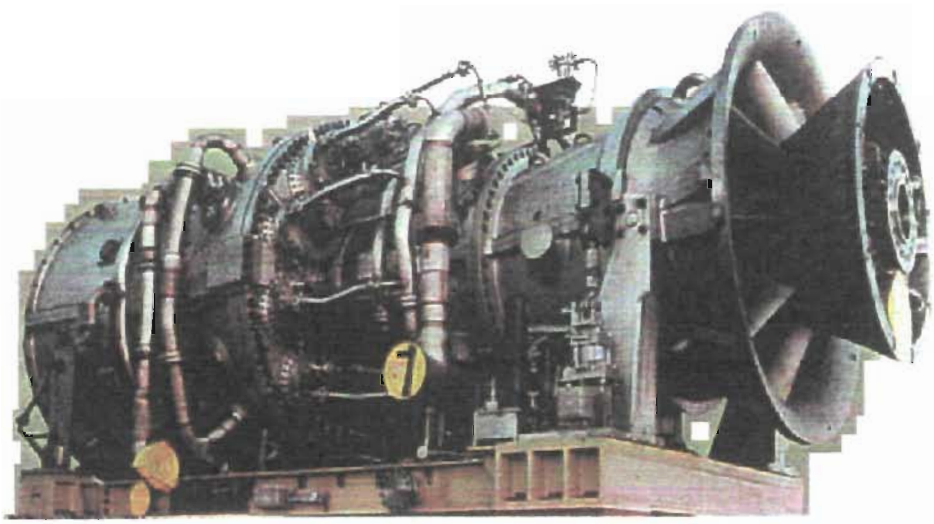


Figure 4 - Internal and External Views of GE MS7001FA

In this FPL project, the unit will operate only in simple cycle mode. Cycle efficiency, defined as a percentage of useful shaft energy output to fuel energy input, is approximately 35 percent for F-Class combustion turbines in simple cycle mode. In addition to shaft energy output, 1 to 2 percent of fuel input energy can be attributed to mechanical losses. The balance is exhausted from the turbine in the form of heat. In combined cycle mode, the thermal efficiency of the 7FA can exceed 56 percent.

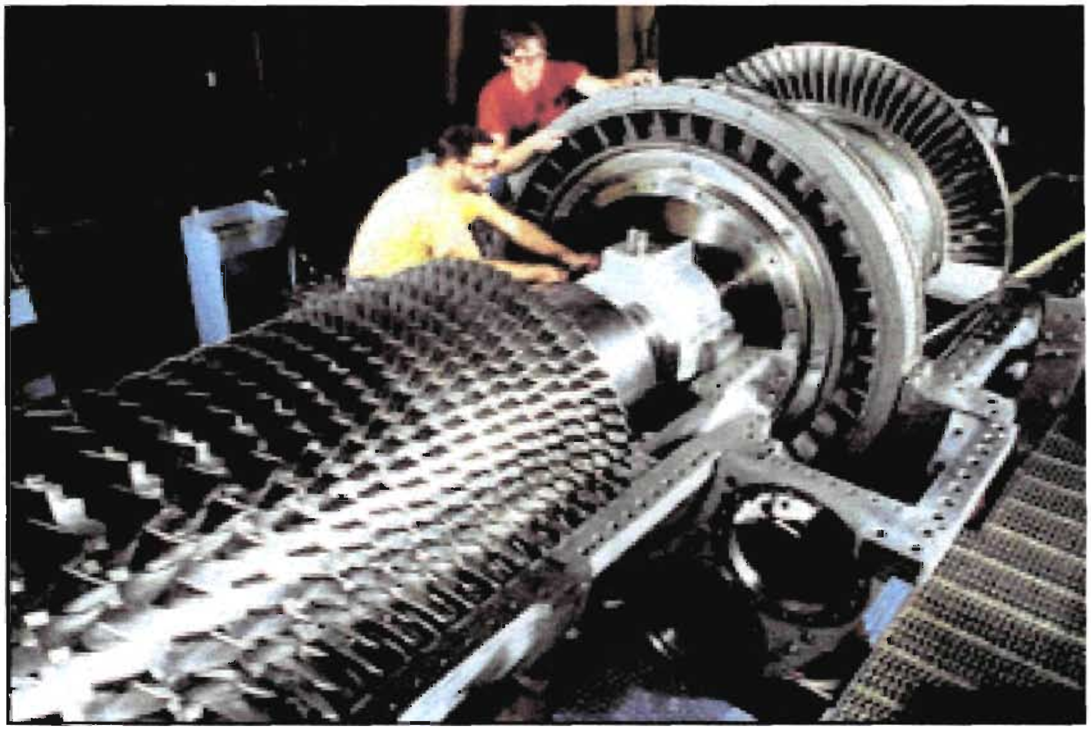


FIGURE 5 – Compressor Section of GE 7FA

At high ambient temperature, the units cannot generate as much power because of lower compressor inlet density. To compensate for a portion of the loss of output (which can be on the order of 20 MW compared to referenced temperatures), inlet foggers will be installed ahead of the combustion turbine inlet. At an ambient temperature of 95 °F, roughly 10 MW of power can be regained by using the foggers.

Other methods to increase power are peak firing and power augmentation (high power modes – HPM). Under HPM, operation at levels greater than full load is possible by increasing fuel input or injecting steam. For the proposed project, operation at HPM when firing natural gas, will not exceed 500 hours per year.

One consequence of HPM is higher NO_X emissions. FPL, for example requests an NO_X emission limit of 10.5 ppmvd under the natural gas base case and 15 ppmvd under HPM.

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review 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.).

This facility is located in Lee County; an area designated as attainment for all criteria pollutants in accordance with Rule 62-204.360, F.A.C. The proposed project is subject to review under Rule 62-212.400., F.A.C., Prevention of Significant Deterioration (PSD) only for volatile organic compounds (VOCs). The proposed project is not subject to PSD review under Rule 62-212.400., F.A.C. for PM/PM_{10}, CO, SO_2, SAM and NO_X. The reason, as discussed below, is that after considering all emissions changes from other contemporaneous projects (the repowering and installation of foggers on old peaking units), the net potential emission increases do not exceed the significant emission rates given in Table 62-212.400-2, F.A.C.

This evaluation consists of a review of the control technology for PM/PM_{10}, CO, SO_2, SAM and NO_X for comparison with similar projects (where PSD actually applies for all of the pollutants) throughout Florida and the United States. A draft determination of best available control technology (BACT) for VOC is included. An analysis of the air quality impact from proposed project is required to insure that there are no exceedances of the National or State Ambient Air Quality Standards.

The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules:

5.1 State Regulations

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-214	Requirements For Sources Subject To The Federal Acid Rain Program
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.520	EPA Continuous Monitor Performance Specifications

5.2 Federal Rules

40 CFR 60	NSPS Subparts GG
40 CFR 60	Applicable sections of Subpart A, General Requirements
40 CFR 72	Acid Rain Permits (applicable sections)
40 CFR 73	Allowances (applicable sections)
40 CFR 75	Monitoring (applicable sections including applicable appendices)
40 CFR 77	Acid Rain Program-Excess Emissions (future applicable requirements)

6. AIR POLLUTION CONTROL TECHNOLOGY

6.1 Applicant Control Technology Proposal

POLLUTANT	CONTROL TECHNOLOGY (CTs)	PROPOSED EMISSION LIMIT
NO_X	Dry Low NO_X for Natural Gas Wet Injection, limited Fuel Oil usage	10.5 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 42 ppmvd (Fuel Oil)
PM/PM_{10}, VE	Pipeline Natural Gas, Low Sulfur Fuel Oil	10/17 lb/hr (Gas/Fuel Oil) 10 percent Opacity (Gas/Fuel Oil)
VOC (BACT)	As Above	1.5 ppmvd (Gas) 3.5 ppmvw (Fuel Oil)
CO	As Above	9 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 20 ppmvd (Fuel Oil)
SO_2 and Acid Mist	As Above	2 gr S/100 ft^3 (in Gas) 0.05% S (in Fuel Oil)

HPM: High Power Modes – (High Temperature Peaking or Steam Power Augmentation)

POLLUTANT	CONTROL TECHNOLOGY (Heaters)	PROPOSED EMISSION LIMIT
NO_X	Low NO_X Burners	0.10 lb/mmBtu
PM/PM_{10}, VE	Pipeline Natural Gas, Good Combustion	20 percent Opacity
VOC	As Above	
CO	As Above	0.075 lb/mmBtu
SO_2 and Acid Mist	As Above	2 gr S/100 ft^3 (in Gas)

According to the application, the two new proposed units will emit approximately 741 tons per year (TPY) of NO_X, 280 TPY of CO, 26 TPY of VOC, 91 TPY of SO_2, and 91 TPY of PM/PM_{10}.

An evaluation of the HAP emissions, as presented by the applicant, indicates that emissions are less than 25 tons/year for all HAPs and less than 10 tons/yr for a single HAP.

6.2 Standards of Performance for New Stationary Sources

The minimum project control technology basis is 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (NSPS). Subpart GG was adopted by the Department by reference in Rule 62-204.800, F.A.C. The key emission limits required by Subpart GG are 75 ppm NO_X @15% O_2. (assuming 25 percent efficiency) and 150 ppm SO_2 @15% O_2 (or <0.8% sulfur in fuel). The proposal is consistent with the NSPS that allows NO_X emissions over 100 ppm for the high efficiency units to be purchased by FPL. No National Emission Standards for Hazardous Air Pollutants exist for stationary gas turbines.

There are currently no applicable NSPS standards for direct fired natural gas heaters (approximately 100 mmBtu/hr heat input).

6.3 Determinations by EPA and States

Tables 1 and 2 are samples of information on recent control technology determinations by EPA and the States for simple cycle projects.

6.4 Review of Combustion Turbine Control Technologies

A complete discussion of control options was not required because the project is not subject to a Best Available Control Technology Determination for NO_X, SO_2, PM/PM_{10} and CO. However the applicant discussed the technology to be employed in order to comply with the New Source Performance Standards and the requested limits. The Department has included other information typically included in a complete BACT determination for comparison purposes. The BACT for VOC is included in Appendix BD attached to this Technical Evaluation and Preliminary Determination (TEPD).

6.4.1 Nitrogen Oxides Formation

Some of the discussion in this section is based on a 1993 EPA document on Alternative Control Techniques for NO_X Emissions from Stationary Gas Turbines. Project-specific information is included where applicable.

Nitrogen oxides form in the gas turbine combustion process as a result of the dissociation of molecular nitrogen and oxygen to their atomic forms and subsequent recombination into seven different oxides of nitrogen. Thermal NO_X forms in the high temperature area of the gas turbine combustor. Thermal NO_X increases exponentially with increases in flame temperature and linearly with increases in residence time. Flame temperature is dependent upon the ratio of fuel burned in a flame to the amount of fuel that consumes all of the available oxygen.

By maintaining a low fuel ratio (lean combustion), the flame temperature will be lower, thus reducing the potential for NO_X formation. Prompt NO_X is formed in the proximity of the flame front as intermediate combustion products. The contribution of Prompt to overall NOX is relatively small in near-stoichiometric combustors and increases for leaner fuel mixtures. This provides a practical limit for NO_X control by lean combustion.

Table 1 – Nitrogen Oxides Controls and Limits for Recent Simple Cycle Projects

Project Location	Power Output (MW)	NO_X Limit ppmvd @ 15% O_2 and Fuel	Technology	Comments
FPL Ft.Myers, FL	340 CON	10.5 (Base), 15 (HPM) - NG 42 - No. 2 FO	DLN WI	2x170 MW GE 7FA CTs - Non BACT 500 hrs - oil, 500 hrs - HPM
FPL Martin, FL	340	9 (Base) 12 (PA) 15 (PK) -NG 42 - No. 2 FO	DLN WI	2x170 MW GE 7FA CTs Issued 8/00 500 hrs on oil
Granite Hardee, FL*	510	10.5 - NG 42 - No. 2 FO	DLN WI	3x170 MW GE 7FA CTs Issued 7/00. 500 hrs on oil
Granite Hardee, FL*	360 - 510	15 - NG	DLN WI	3x170 MW WH 501D5A or 501F CTs Issued 8/00. Fuel oil prohibited
Granite Hardee, FL*	540	5 - NG 10 - No. 2 FO	HSCR WI	3x180 MW ABB GT-24 CTs 8/00. 1st 250 hrs of F.O. @42ppm
DeSoto Arcadia, FL	510	9 - NG 42 - No. 2 FO	DLN WI	3x170 MW GE PG7241FA CTs 1000 hrs on oil
Vandolah Hardee, FL	680	9 - NG 42 - No. 2 FO	DLN WI	4x170 MW GE 7FA CTs Issued 11/99. 1000 hrs on oil
Oleander Brevard, FL	850	9 - NG 42 - No. 2 FO	DLN WI	5x170 MW GE 7FA CTs Issued 11/99. 1000 hrs on oil
JEA Baldwin, FL	510	10.5 - NG 42 - No. 2 FO	DLN WI	3x170 MW GE 7FA CTs Issued 10/99. 750 hrs on oil
Reliant Osceola, FL	510	10.5 - NG 42 - No. 2 FO	DLN WI	3x170 MW GE 7FA CTs Issued 12/99. 750 hrs on oil
Dynegy, FL	510	15 – NG	DLN	3x170 MW WH 501F CTs Issued 3/00. Gas only
Dynegy Heard, GA	510	15 – NG	DLN	3x170 MW WH 501F CTs Issued 1999. Gas only
Tenaska Heard, GA	960	15 - NG 42 - No. 2 FO	DLN WI	6x170 MW GE 7FA CTs Issued 12/98. 720 hrs on oil
Calvert City, KY	340	25 - NG	WI	2x170 MW GE 7FA CTs Draft 1999. ?? hrs on oil
Mid-GA Cogen	308	9 NG 20 – FO	DLN & SCR	2x119 MW WH 501D5A CT's Achieves 15 ppmvd by DLN alone
Dynegy Reidsville, NC	900	15 – NG (by 2002) 42 – No. 2 FO	DLN WI	5x180 MW WH 501F CTs Initially 25 ppm NO_X limit on gas Draft 5/98. 1000 hrs on oil.
Lyondell Harris, TX	160	25 – NG	DLN	1x160 MW WH 501F CTs Issued 11/99. Gas only
Southern Energy, WI	525	15/12 – NG 42 - No. 2 FO	DLN WI	3x175 MW GE 7FA CTs 15/12 ppm are on 1/24 hr basis Issued 1/99. 800 hrs on oil
Carson Energy, CA	42	5 – NG (LAER)	Hot SCR	42 MW LM6000PA. Startup 1995. Ammonia limit is 20 ppmvd
McClelland AFB, CA	85	5 – NG (LAER)	Hot SCR	85 MW GE 7EA. Applied 1999 Ammonia proposal 10 ppmvd
Lakeland, FL	250 CON	9/9 – NG (by 2002) 42/15 – No. 2 FO	DLN/HSCR WI/HSCR	2?0 MW WH 501G CT Initially 25 ppm NO_X limit on gas Issued 7/98. 250 hrs on oil.
PREPA, PR	248 CON	10 – No. 2 FO	WI & HSCR	3x83 MW ABB GT11N CTs Issued 12/95.

CON = Continuous
SC = Simple Cycle
INT = Intermittent
PK = Peaking

DLN = Dry Low NO_X Combustion
SCR = Selective Catalytic Reduction
HSCR = Hot SCR
HPM = High Power Mode

FO = Fuel Oil
NG = Natural Gas
WI = Wet Injection
PA = Power Augmentation

GE = General Electric
WH = Westinghouse
ABB = Asea Brown Bovari

* Only one of these options will be constructed

Table 2 – CO, VOC, and PM_{10} Controls and Limits for Simple Cycle Projects

Project Location	CO – ppm (or as indicated)	VOC – ppm (or as indicated)	PM – lb/hr (or as indicated)	Technology and Comments
FPL, Ft Myers, FL	9- (Base), 15 (HPM) - NG 20- FO	1.5-NG 3.5-FO	10% Opacity	Clean Fuels Combustion
FPL Martin, FL	9 (Base) 15 (PA) - NG 20- FO	1.5-NG 3.5-FO	10% Opacity	Clean Fuels Good Combustion
Granite Hardee, FL GE	12 – NG 20 – FO	3 – NG 7.5 – FO	10% Opacity	Clean Fuels Good Combustion
Granite Hardee, FL 501F	16 – NG	3 – NG	10% Opacity	Clean Fuels Good Combustion
Granite Hardee, FL D5A	10 – NG	3 – NG	10% Opacity	Clean Fuels Good Combustion
Granite Hardee, FL ABB	6 – NG 25 – FO	3 – NG 7.5 – FO	10% Opacity	Clean Fuels Good Combustion
Shady Hills Pasco, FL	12 – NG 20 – FO	1.4 – NG 7 – FO	10 lb/hr – NG 17 lb/hr – FO	Clean Fuels Good Combustion
Vandolah Hardee, FL	12 – NG 20 – FO	1.4 – NG 7 – FO	10 lb/hr – NG 17 lb/hr – FO	Clean Fuels Good Combustion
Oleander Brevard, FL	12 – NG 20 – FO	3 – NG 6 – FO	10% Opacity	Clean Fuels Good Combustion
JEA Baldwin, FL	12 – NG 20 – FO	1.4 – NG/FO Not PSD	9/17 lb/hr – NG/FO 10% Opacity	Clean Fuels Good Combustion
Reliant Osceola, FL	10.5 – NG 20 – FO	2.8 lb/hr – NG 7.5 lb/hr – FO	9 lb/hr – NG 17 lb/hr – FO	Clean Fuels Good Combustion
TEC Polk Power, FL	15 – NG 33 – FO	.7 – NG 7 – FO	10% Opacity	Clean Fuels Good Combustion
Dynegy, FL	25 – NG		8.2 lb/hr – NG 10% Opacity	Clean Fuels Good Combustion
Dynegy Heard Co., GA	25 – NG	? - NG	0.005 lb/mmBtu – NG 10% Opacity	Clean Fuels Good Combustion
Tenaska Heard Co., GA	15 – NG 20 – FO	? – NG ? – FO	? – NG ? lb/hr – FO	Clean Fuels Good Combustion
Calvert City, KY	30 – NG (full load) 90 – NG (other loads)	? - NG	? - NG	Clean Fuels Good Combustion
Mid-GA Cogen	10 – NG 30 – FO	6 – NG 30 – FO	18 – NG 55 lb/hr – FO	Clean Fuels Good Combustion
Dynegy Reidsville, NC	25 – NG 50 – FO	6 lb/hr – NG 8 lb/hr – FO	6 lb/hr – NG 23 lb/hr – FO	Clean Fuels Good Combustion
Lyondell Harris, TX	25 – NG			Clean Fuels Good Combustion
RockGen Cristiana, WI	12@>50% load – NG 15@>75% 24@<75% - FO	2 – NG 5 – FO	18 lb/hr – NG 44 lb/hr – FO	Clean Fuels Good Combustion
RockGen Cristiana, WI	12@>50% load – NG 15@>75% 24@<75% - FO	2 – NG 5 – FO	18 lb/hr – NG 44 lb/hr – FO	Clean Fuels Good Combustion
Carson Energy, CA	6 – NG			Oxidation Catalyst
McClelland AFB, CA	23 – NG	3.9 - NG	7 lb/hr	Clean Fuels Good Combustion
Lakeland, FL	25 - NG or 10 by Ox Cat 75 - FO @ 15% O_2	4 – NG 10 – FO	10% Opacity	Clean Fuels Good Combustion
PREPA, PR	9 – FO @15% O_2	11 – FO @15% O_2	0.0171 gr/dscf	Clean Fuels Good Combustion

In all but the most recent gas turbine combustor designs, the high temperature combustion gases are cooled to an acceptable temperature with dilution air prior to entering the turbine (expansion) section. The sooner this cooling occurs, the lower the thermal NO_X formation. Cooling is also required to protect the first stage nozzle. When this is accomplished by air cooling, the air is injected into the component and is ejected into the combustion gas stream, causing a further drop in combustion gas temperature. This, in turn, lowers achievable thermal efficiency for the unit.

The relationship between flame temperature, firing temperature, unit efficiency, and NO_X formation can be appreciated from Figure 6 which is from a General Electric discussion on these principles.

By maintaining a low fuel ratio (lean combustion), the flame temperature will be lower, thus reducing the potential for NO_X formation. Prompt NO_X is formed in the proximity of the flame front as intermediate combustion products. The contribution of Prompt to overall NO_X is relatively small in near-stoichiometric combustors and increases for leaner fuel mixtures. This provides a practical limit for NO_X control by lean combustion.

Fuel NO_X is formed when fuels containing bound nitrogen are burned. This phenomenon is not important when combusting natural gas. It is not a significant issue for the Ft Myers project because these units will not be continuously operated while burning oil. Low sulfur fuel oil (which has more fuel-bound nitrogen than natural gas) is proposed to be used for no more than 500 hours per year (per CT).

Uncontrolled emissions range from about 100 to over 600 parts per million by volume, dry, corrected to 15 percent oxygen (ppmvd @15% O_2). The Department estimates uncontrolled emissions at approximately 200 ppmvd @15% O_2 for each turbine of the Ft Myers Project. The proposed NO_X controls will reduce these emissions significantly.

6.4.2 NO_X Control Techniques

Wet Injection

Injection of either water or steam directly into the combustor lowers the flame temperature and thereby reduces thermal NO_X formation. Typical emissions achieved by wet injection are in the range of 15–25 ppmvd when firing gas and 42 ppmvd when firing fuel oil in large combustion turbines. These values often form the basis, particularly in combined cycle turbines, for further reduction to BACT limits by other techniques. Carbon monoxide (CO) and hydrocarbon (HC) emissions are relatively low for most gas turbines. However steam and (more so) water injection may increase emissions of both of these pollutants.

Combustion Controls: Dry Low NO_X (DLN)

The excess air in lean combustion cools the flame and reduces the rate of thermal NO_X formation. Lean premixing of fuel and air prior to combustion can further reduce NO_X emissions. This is accomplished by minimizing localized fuel-rich pockets (and high temperatures) that can occur when trying to achieve lean mixing within the combustion zones.

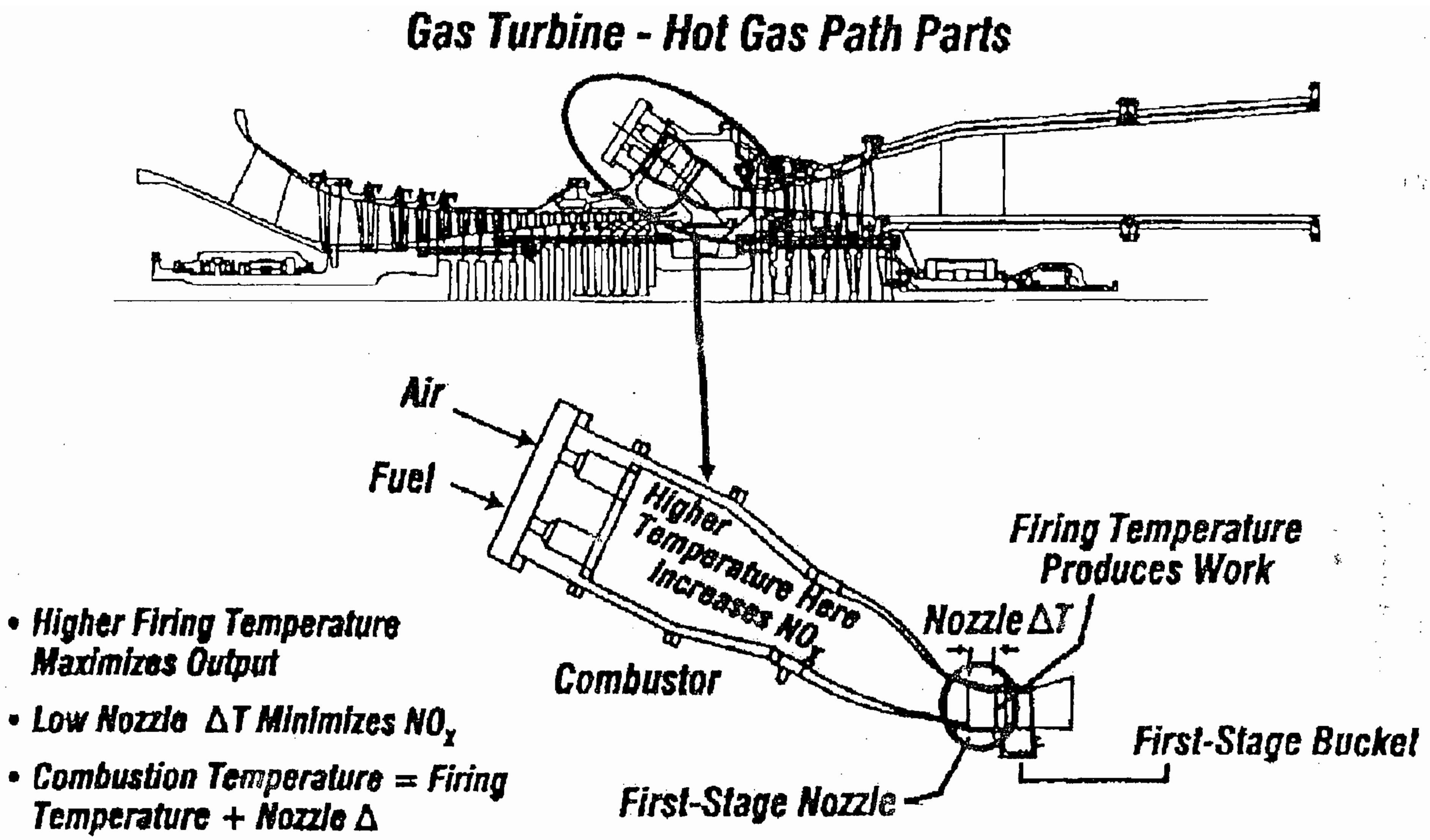


Figure 6 – Relation Between Flame Temperature and Firing Temperature

The above principle is depicted in Figure 7 for a General Electric DLN-1 can-annular combustor operating on gas. For ignition, warm-up, and acceleration to approximately 20 percent load, the first stage serves as the complete combustor. Flame is present only in the first stage, which is operated as lean stable combustion will permit. With increasing load, fuel is introduced into the secondary stage, and combustion takes place in both stages. When the load reaches approximately 40 percent, fuel is cut off to the first stage and the flame in this stage is extinguished. The venturi ensures the flame in the second stage cannot propagate upstream to the first stage. When the fuel in the first-stage flame is extinguished (as verified by internal flame detectors), fuel is again introduced into the first stage, which becomes a premixing zone to deliver a lean, unburned, uniform mixture to the second stage. The second stage acts as the complete combustor in this configuration.

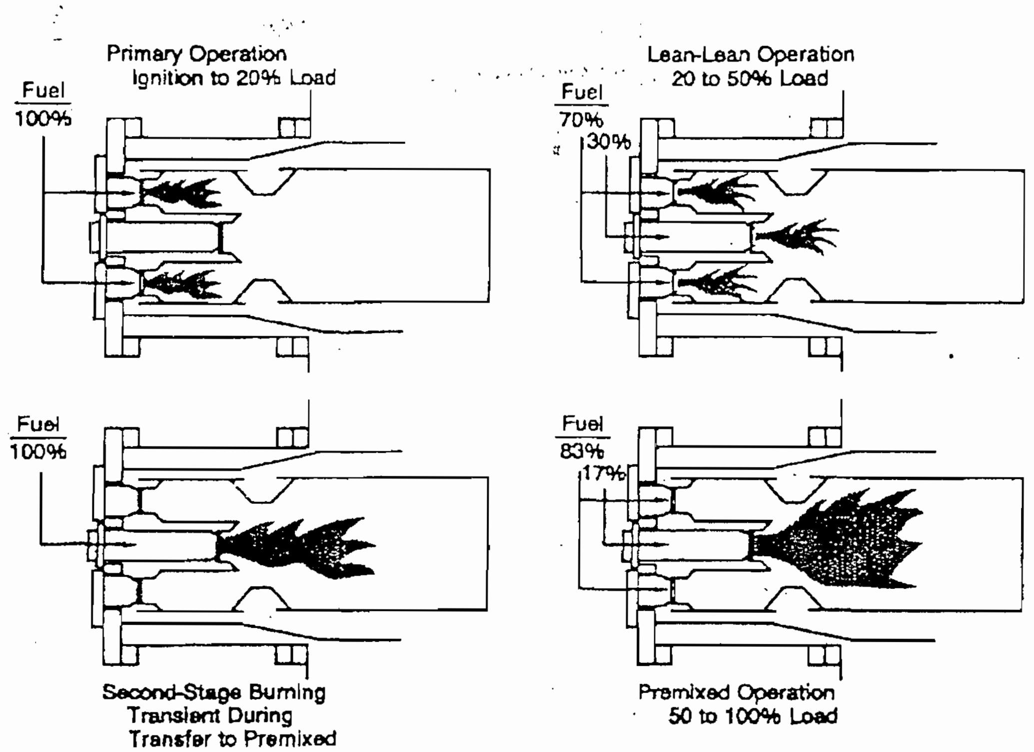
To further reduce NO_X emissions, GE developed the DLN-2.0 (cross section shown in Figure 7) wherein air usage (other than for premixing) was minimized. The venturi and the centerbody assembly were eliminated and each combustor has a single burning zone. So-called "quaternary fuel" is introduced through pegs located on the circumference of the outward combustion casing.

GE has made further improvements in the DLN design. The most recent version is the DLN-2.6 (proposed for the Ft Myers project). The combustor is similar to the DLN-2 with the addition of a sixth (center) fuel nozzle. The emission characteristics of the DLN-2.6 combustor while firing natural gas are given in Figure 8 for a unit tuned to meet a 15 ppmvd NO_X limit (by volume, dry corrected to at 15 percent oxygen) at JEA's Kennedy Station.

NO_X concentrations are higher in the exhaust at lower loads because the combustor does not operate in the lean pre-mix mode. Therefore such a combustor emits NO_X at concentrations of 15 ppmvd at loads between 50 and 100 percent of capacity, but concentrations as high as 100 ppmvd at less than 50 percent of capacity. Note that VOC comprises a very small amount of the "unburned hydrocarbons" which in turn is mostly non-VOC methane.

The combustor can be tuned differently to achieve emissions as low as 9 ppm of NO_X and 9 ppm of CO. Emissions characteristics by wet injection NO_X control while firing oil are expected to be similar for the DLN-2.6 as they are for those of the DLN-2.0 shown in Figure 9. Simplified cross sectional views of the totally premixed (while firing natural gas) DLN-2.6 combustor to be installed at the Ft Myers project are shown in Figure 10.

Further NO_X reductions related to flame temperature control are possible such as closed loop steam cooling. This feature is available only in larger units (G or H Class technology) than the units planned by FPL. It is more feasible for a combined cycle unit with a heat recovery steam generator (HRSG). In simple cycle, a once-through steam generator would be required. Steam is circulated through the internal portion of the nozzle component, the transition piece between the combustor and the nozzle, or certain turbine blades.



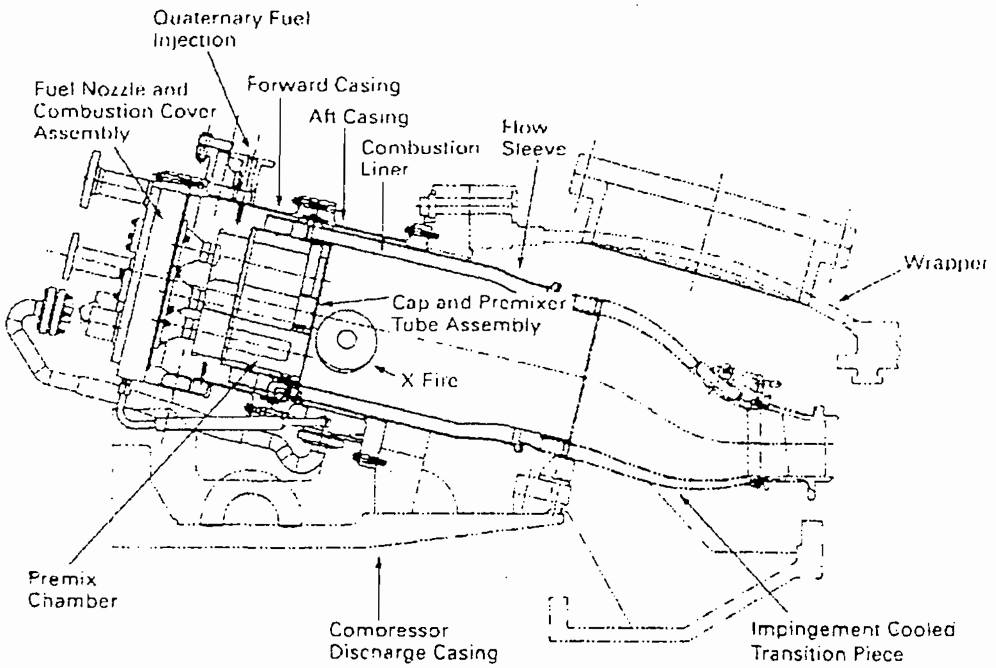


Figure 7 – Dry Low NO_X Operating Modes – DLN-1
Cross Section of GE DLN-2

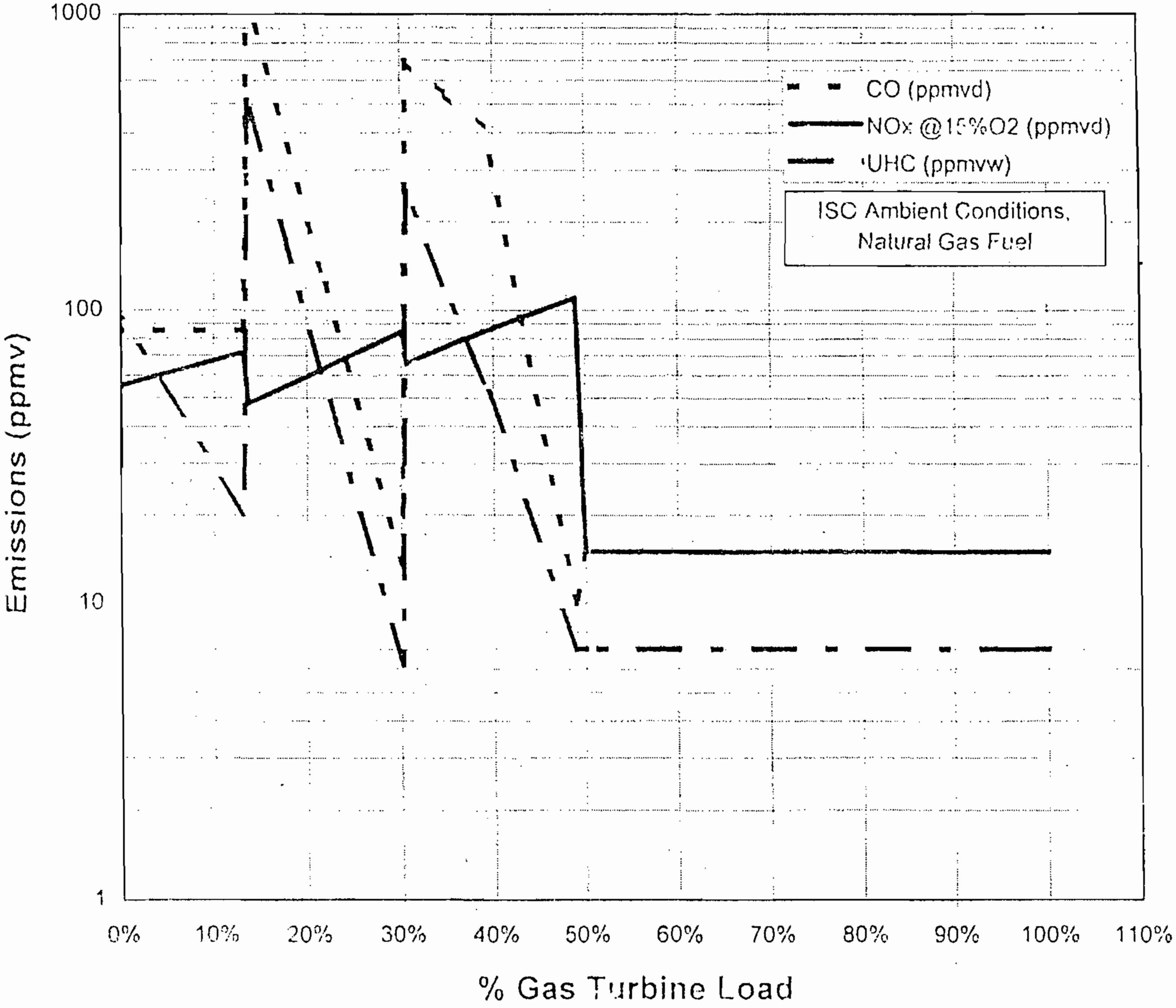


Figure 8 – Emissions Performance Curves for GE DLN-2.6 Combustor Firing Natural Gas in a Dual Fuel GE 7FA Combustion Turbine

(Simple Cycle Intermittent Duty – If Tuned to 15 ppmvd NO_X)

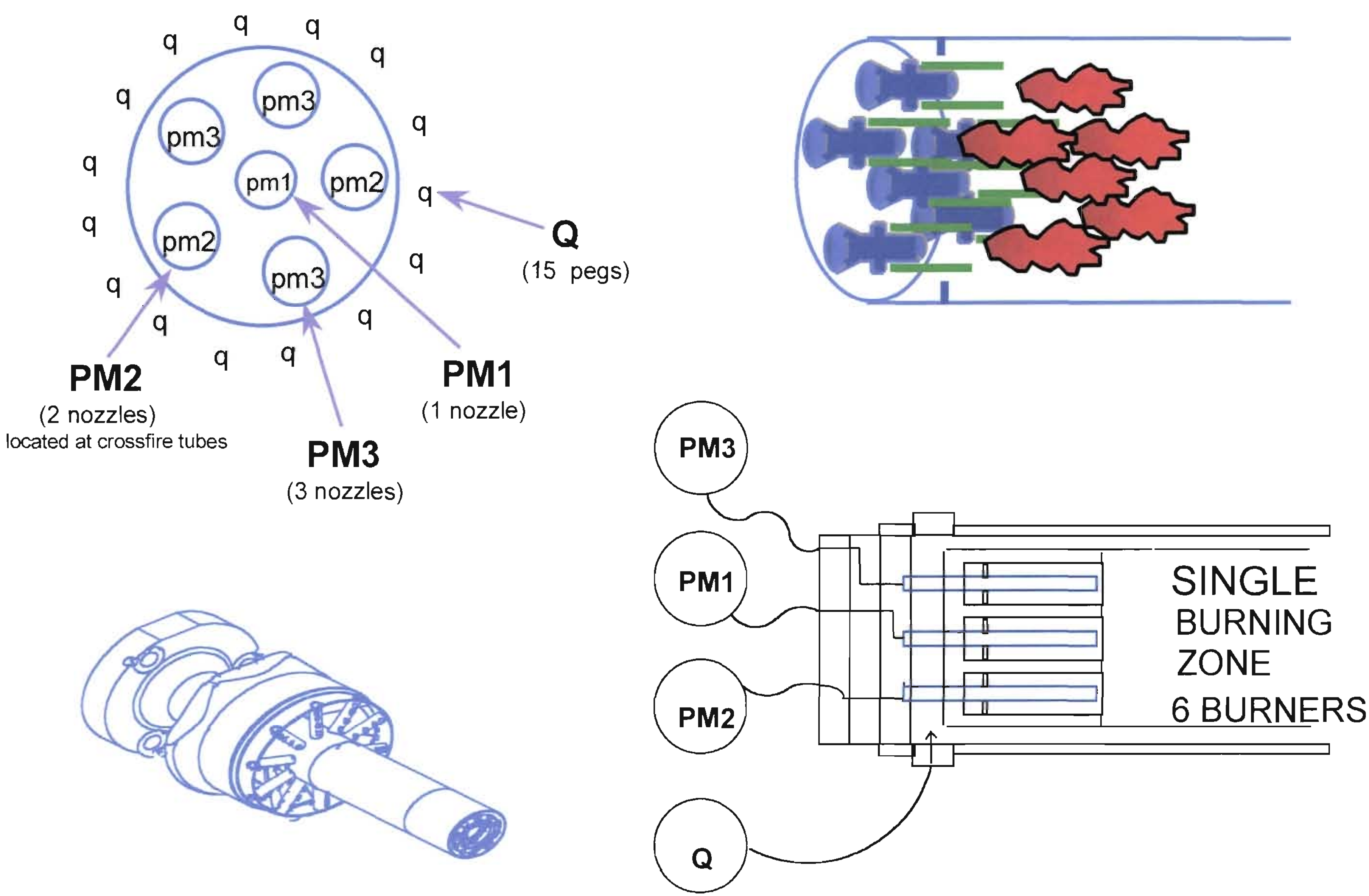


Figure 10 - DLN2.6 Fuel Nozzle Arrangement

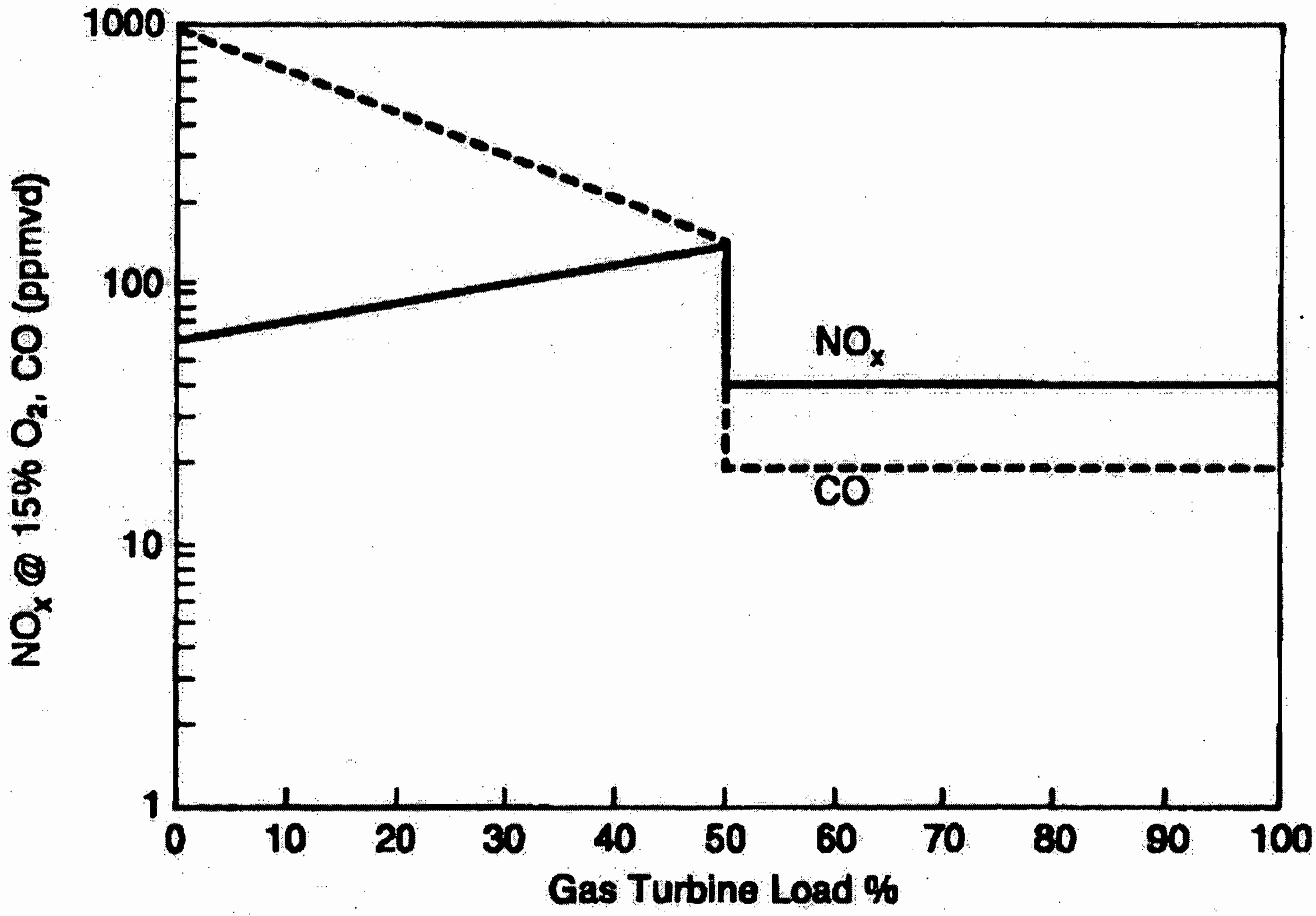


Figure 9 – Emissions Performance for DLN-2 Combustors Firing Fuel Oil in Dual Fuel GE 7FA Turbine

Through steam cooling, the difference between flame temperature and firing temperature into the first stage is minimized and higher efficiency is attained. Flame temperatures and NO_X emissions can therefore be maintained at comparatively low levels even at high firing temperatures (refer back to Figure 6). At the same time, thermal efficiency should be greater when employing steam cooling instead of air cooling.

At the present time, emissions achieved by combustion controls are as low as 9 ppmvd from large simple cycle gas turbines. Specialized dual fuel DLN burners were installed in a project in Israel[1] but their performance on fuel oil is not known to the Department. Mitsubishi is also developing a dual-fuel DLN. Optimization of premix fuel-air nozzle and performance was verified in high-pressure combustion tests. Commissioning tests on gas and oil burning were completed at an undesignated site.[2] The details are not yet available in English.

An important consideration is that power and efficiency are sacrificed in the effort to achieve low NO_X by combustion technology. This limitation is seen in Figure 11 from an EPRI report.[3] Basically developments such as single crystal blading, aircraft compressor design, high technology blade cooling have helped to greatly increase efficiency and lower capital costs. Further improvements are more difficult in large part because of the competing demands for air to support lean premix combustion and to provide blade cooling. New concepts are under development by GE and the other turbine manufacturers to meet the challenges implicit in Figure 11.

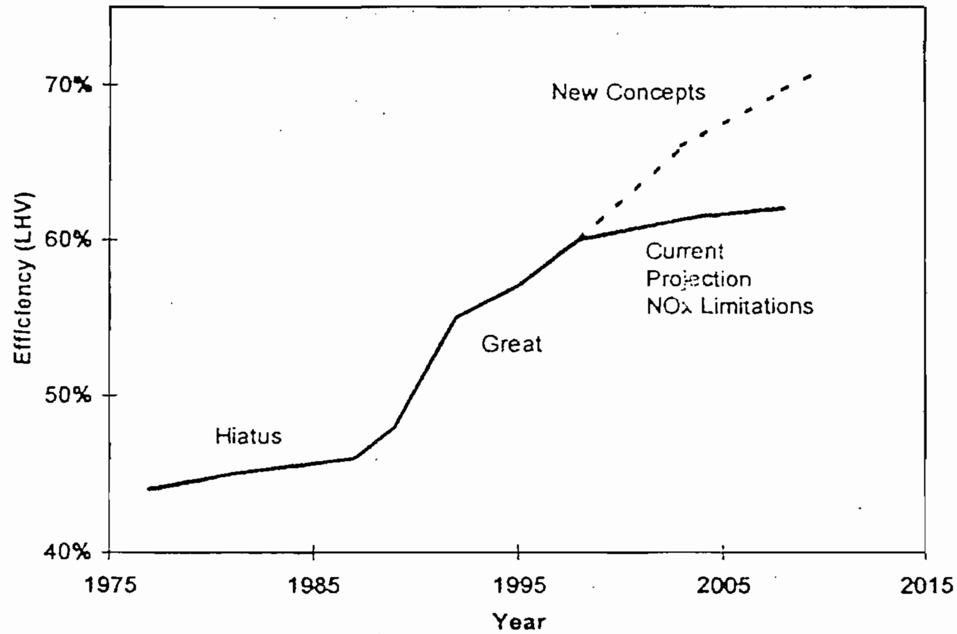


Figure 11 – Efficiency Increases in Combustion Turbines

Selective Catalytic Combustion

Selective catalytic reduction (SCR) is an add-on NO_X control technology that is employed in the exhaust stream following the gas turbine. SCR reduces NO_X emissions by injecting ammonia into the flue gas in the presence of a catalyst. Ammonia reacts with NO_X in the presence of a catalyst and excess oxygen yielding molecular nitrogen and water. The catalysts used in combined cycle, low temperature applications (conventional SCR), are usually vanadium or titanium oxide and account for almost all installations. For high temperature applications (Hot SCR up to 1100 °F), such as simple cycle turbines, zeolite catalysts are available but used in few applications to-date. SCR units are typically used in combination with wet injection or DLN combustion controls.

In the past, sulfur was found to poison the catalyst material. Sulfur-resistant catalyst materials are now becoming more available. Catalyst formulation improvements have proven effective in resisting sulfur-induced performance degradation with fuel oil in Europe and Japan, where conventional SCR catalyst life in excess of 4 to 6 years has been achieved, while 8 to 10 years catalyst life has been reported with natural gas.

Excessive ammonia use tends to increase emissions of CO, ammonia (slip) and particulate matter (when sulfur-bearing fuels are used).

As of early 1992, over 100 gas turbine installations already used SCR in the United States. Only one combustion turbine project in Florida (FPC Hines Power Block 1) employs SCR. The equipment was installed on a temporary basis because Westinghouse had not yet demonstrated emissions as low as 12 ppmvd by DLN technology at the time the units were to start up in 1998. Seminole Electric will install SCR on a previously permitted 501F unit at the Hardee Unit 3 (Paynes Creek) project. The reasons are similar to those for the FPC Hines Power Block I.

Permit limits as low as 2.0 to 3.5 ppmvd NO_X have been specified using SCR on combined cycle F Class projects throughout the country. The recently permitted Kissimmee Cane Island Unit 3 project is one example.[4]

Selective Non-Catalytic Combustion

Selective non-catalytic reduction (SNCR) reduction works on the same principle as SCR. The differences are that it is applicable to hotter streams than conventional or hot SCR, no catalyst is required, and urea can be used as a source of ammonia. No applications have been identified wherein SNCR was applied to a gas turbine because the exhaust temperature of 1100 °F is too low to support the NO_X removal mechanism.

The Department did, however, specify SNCR as one of the available options for the combined cycle Santa Rosa Energy Center. The project will incorporate a large 600 mmBtu/hr duct burner in the heat recovery steam generator (HRSG) and can provide the acceptable temperatures (between 1400 and 2000 °F) and residence times to support the reactions.

Catalytic Combustion: $SCONO_X$

$SCONO_X$ is a catalytic add-on technology (and registered trademark) that achieves NO_X control by oxidizing and then absorbing the pollutant onto a honeycomb structure coated with potassium carbonate. The pollutant is then released as molecular nitrogen during a regeneration cycle that requires dilute hydrogen gas. The technology has been demonstrated on small units in California and has been purchased for a small source in Massachusetts.[5]

California regulators and industry sources have stated that the first 250 MW block to install $SCONO_X$ will be at PG&E's La Paloma Plant near Bakersfield.[6] The overall project includes several more 250 MW blocks with SCR for control.[7] USEPA has identified an "achieved in practice" BACT value of 2.0 ppmvd over a three-hour rolling average based upon the recent performance of a Vernon, California natural gas-fired 32 MW combined cycle turbine equipped with $SCONO_X$™.

$SCONO_X$ technology (at 2.0 ppmvd) is considered to represent LAER in non-attainment areas where cost is not a factor in setting an emission limit. It competes with less-expensive SCR in those areas, but has the advantages that it does not cause ammonia emissions in exchange for NO_X reduction. Advantages of the $SCONO_X$ process include in addition to the reduction of NO_X, the elimination of ammonia and the control of VOC and CO emissions..

Recently EPA Region IX acknowledged that $SCONO_X$ was demonstrated in practice to achieve 2.0 ppmv NO_X. [8] Permitting authorities planning to issue permits for future combined cycle gas turbine systems firing exclusively on natural gas, and subject to LAER must recognize this limit which, in most cases, would result in a LAER determination of 2.0 ppmv.

According to a recent press release, the Environmental Segment of ABB Alstom Power offers the technology (with performance guarantees) to "all owners and operators of natural gas-fired combined cycle combustion turbines, regardless of size."[9]

$SCONO_X$ requires a much lower temperature regime that is not available in simple cycle units and is therefore not feasible for this project.

Catalytic Combustion: XONON

Catalytic combustion involves using a catalytic bed to oxidize a lean air and fuel mixture within a combustor instead of burning with a flame as described above. In a catalytic combustor the air and fuel mixture oxidizes at lower temperatures, producing less NO_X.[10] In the past, the technology was not reliable because the catalyst would not last long enough to make the combustor economical.

There has been increased interest in catalytic combustion as a result of technological improvements and incentives to reduce NO_X emissions without the use of add-on control equipment and reagents. Westinghouse is working to replace the central pilot in its DLN technology with a catalytic pilot in a project with Precision Combustion Inc.

Catalytica has developed a system know as XONON (registered trademark), which works by partially burning fuel in a low temperature pre-combustor and completing the combustion in a catalytic combustor. The overall result is low temperature partial combustion (and thus lower NO_X combustion) followed by flameless catalytic combustion to further attenuate NO_X formation.

In 1998, Catalytica announced the startup of a 1.5 MW Kawasaki gas turbine equipped with XONON.[11] The turbine is owned by Catalytica and is located at the Gianera Generating Station of Silicon Valley Power, a municipally owned utility serving the City of Santa Clara, California. Previously, this turbine and XONON system had successfully completed over 1,200 hours of extensive full-scale tests at a project development facility in Oklahoma which documented XONON's ability to limit emissions of NO_X to less than 3 ppmvd.

Recently, Catalytica and GE announced that the XONON combustion system has been specified as the preferred emissions control system with GE 7FA turbines that have been ordered for Enron's proposed 750 MW Pastoria Energy Facility.[12] The project will enter commercial operation by the summer of 2001.

In principle, XONON will work on a simple cycle project. However, the Department does not have information regarding the status of the technology for fuel oil firing and cycling operations. XONON appears to be an up-and-coming technology, the development of which will be watched closely by the Department for future applications.

6.4.3 Particulate Matter (PM/PM_{10}) Control

Particulate matter is generated by various physical and chemical processes during combustion and will be affected by the design and operation of the NO_X controls. The particulate matter emitted from this unit will mainly be less than 10 microns in diameter (PM_{10}).

Natural gas and low sulfur fuel oil (0.05% S content) will be the only fuels fired and are efficiently combusted in gas turbines. Clean fuels are necessary to avoid damaging turbine blades and other components already exposed to very high temperature and pressure. Natural gas is an inherently clean fuel and contains no ash.

A technology review indicated that the top control option for PM_{10} is a combination of good combustion practices, fuel quality, and filtration of inlet air. Annual emissions of PM/PM_{10} are expected to be less than 91 tons per year (two combustion turbines and heaters). PM testing will be required for initial and upon permit renewal. Annual compliance will be demonstrate by VE testing (VE is surrogate).

6.4.4 Carbon Monoxide (CO) Control

CO is emitted from combustion turbines due to incomplete fuel combustion. Combustion design and catalytic oxidation are the control alternatives that are viable for the project. The most stringent control technology for CO emissions is the use of an oxidation catalyst.

Most installations using catalytic oxidation are located in the Northeast. Among them are the 272 Berkshire, Massachusetts facility, 240 MW Brooklyn Navalyard Facility, the 240 MW Masspower facility, the 165 MW Pittsfield Generating Plant in Massachusetts, and the 345 MW Selkirk Generating Plant in New York. Catalytic oxidation was recently installed at a cogeneration plant at Reedy Creek (Walt Disney World), Florida to avoid PSD review which would have been required due to increased operation at low load.

Most combustion turbines incorporate good combustion to minimize emissions of CO. These installations typically achieve CO emissions between 10 and 30 ppm at full load, even as they achieve relatively low NO_X emissions by SCR or dry low NO_X means. By comparison, the value of 9 (gas) and 20 (oil) ppmvd proposed by FPL appear relatively low, but consistent with the capabilities of the DLN-2.6 technology as discussed above.

6.4.5 Draft BACT Analysis for Volatile Organic Compound (VOC) Control

Volatile organic compound (VOC) emissions, like CO emissions, are formed due to incomplete combustion of fuel. There are no viable add-on control techniques as the combustion turbine itself is very efficient at destroying VOC. The applicant has proposed good combustion practices to control VOC to 1.5 ppmvd (gas) and 3.5 ppmvw (oil). This value is less than or equal to most BACT-based VOC limits listed above. According to GE, even lower VOC emissions were achieved during recent tests of the DLN-2.6 technology when firing natural gas.[13]

Annual emissions of VOC are expected to be approximately 26 TPY from the simple cycle units. This is less than significant with respect to PSD applicability. However, the difference between future emissions and past actual emissions (when considering contemporaneous emissions from the repowering and fogger projects) is more than the 40 ton per year (PSD). Therefore, this pollutant has been reviewed under PSD regulations and the Draft BACT emission limits are proposed to be 1.5 ppmvd (gas) and 3.5 ppmvw (oil).

6.5 Background on Selected Gas Turbine

FPL plans to the purchase two (2) 170 MW General Electric MS7241FA simple cycle gas turbines.

The first commercial GE 7F Class unit was installed at the Virginia Power Chesterfield Station in 1990.[14] The initial units had a firing temperature of 2300°F and a combined cycle efficiency exceeding 50 percent. By the mid-90s, the line was improved by higher combustor pressure, a firing temperature of 2400°F, and a combined cycle efficiency of approximately 56 percent based on a 167 MW combustion turbine. The line was redesignated as the 7FA Class.

The first GE 7F/FA project in Florida was at the FPL Martin Plant in 1993 and entered commercial service in 1994.[15] The units were equipped with DLN-2 combustors with a permitted NO_X limit of 25 ppm These actually achieve less 25 ppm of NO_X and 15 ppm of CO. The City of Tallahassee recently received approval to install a GE 7FA Class unit at its Purdom Plant.[16] Although permitted emissions are 12 ppm of NO_X, the City obtained a performance guarantee from GE of 9 ppm.[17]

General Electric, other manufacturers, and their customers are relying on further advancement and refinement of DLN technology to provide sufficient NO_X control for their combined cycle turbines in Florida. Where required by BACT determinations of certain states, General Electric incorporates SCR in combined cycle projects.[18]

The approach of progressively refining such technology is a proven one, even on some relatively large units. Basically this was the strategy adopted in Florida throughout the 1990's. Recently GE Frame 7 FA units met performance guarantees of 9 ppm with DLN-2.6 burners at Fort St. Vrain, CO and Clark County, WA.[19] GE has already achieved emissions of approximately 6 ppm on gas at a dual-fuel MW 7EA (120 MW combined cycle) unit at Cane Island Power Park in Kissimmee, FL.[20] The Cane Island unit is equipped with DLN-2 combustors. According to GE, similar performance is expected soon on the 7FA line and performance guarantees less than 9 ppm can be expected using the DLN-2.6 combustors for units delivered in a couple of years.[21]

The 10.5 ppm (base-gas), 15 ppm (HPM-gas) and the 42 ppmvd (oil) NO_X limits requested by FPL is comparable with some recent BACT determinations for F Class simple cycle units, such as those previously listed. However, as previously mentioned, the project is not subject to BACT for NO_X.

6.6 Control Technology Determination

Following are the emission limits determined for this FPL project assuming full load. Values for NO_X are corrected to 15% O_2. These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are given in the permit Specific Conditions 15 and 16.

POLLUTANT	CONTROL TECHNOLOGY	EMISSION LIMIT
NO_X	Dry Low NO_X for Natural Gas Wet Injection and limited Fuel Oil usage	10.5 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 42 ppmvd (Fuel Oil)
PM/PM_{10}, VE	Pipeline Natural Gas, Low Sulfur Fuel Oil	10/17 lb/hr (Gas/Fuel Oil) 10 percent Opacity (Gas/Fuel Oil)
VOC (BACT)	As Above	1.5 ppmvd (Gas) 3.5 ppmvw (Fuel Oil)
CO	As Above	9 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 20 ppmvd (Fuel Oil)
SO_2 and Acid Mist	As Above	2 gr S/100 ft^3 (in Gas) 0.05% S (in Fuel Oil)

HPM: High Power Modes – (High Temperature Peaking or Steam Power Augmentation)

6.7 Rationale for Control Technology Determination

- FPL obtained a guarantee from GE for DLN-2.6 combustors which have been demonstrated to meet all of the above limits on "7FA" Class gas turbines.
- FPL specifically requested that these limits be incorporated into the permit. The project could "net out" of PSD review and BACT with higher limits (except for VOC).

- All of the combustion turbine emission limits comply with the NSPS and are comparable or equal to recent Department BACT determinations applicable to new units at start-up.
- PM_{10} emissions will be very low and difficult to measure. The Department, with FPL's concurrence, will set a visible emission standard of 10 percent opacity.
- CO emissions from FPL's project are low (approximately 9 ppmvd). With FPL's concurrence, the Department will set CO limits achievable by good combustion equal to 9 ppmvd for the natural gas base case. The limits for the HPM and oil cases will be 15 and 20 ppmvd respectively. For reference, CO limits for the Lakeland and Tallahassee projects are 25 ppm on gas.
- VOC emissions of 1.5 ppmvd (gas) and 3.5 ppmvw (oil) proposed by FPL as **BACT** are at the lower end of values determined as BACT. Good Combustion is sufficient to achieve these low levels with the DLN-2.6 combustors while firing natural gas.
- The heater for gas heating during startup and simple cycle operation is not subject to any applicable NSPS.

6.8 Compliance Procedures

Pollutant	Compliance Procedure
Visible Emissions	Method 9
Volatile Organic Compounds	Method 18, 25, or 25A (as required by permit)
Carbon Monoxide	Annual Method 10 (can use RATA if at capacity)
NO_X (base-30-day average) NO_X (HPM-24-hr average)	NO_X CEMS, O_2 or CO_2 diluent monitor, and flow device as needed NO_X CEMS, O_2 or CO_2 diluent monitor, and flow device as needed
NO_X (NSPS initial performance)	Method 20 (can use RATA if at capacity)

6.9 Excess Emissions

Allowable Excess Emissions: Pursuant to Rule 62-210.200 F.A.C., excess emissions are allowable under the following scenarios: Valid hourly emission rates shall not included periods of startup, shutdown, or malfunction as defined in Rule 62-210.200 F.A.C., where emissions exceed the applicable NO_X standard. These excess emissions periods shall be reported as required in permit Specific Condition 23. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart. [Rules 62-4.070 F.A.C., 62-210.700 F.A.C and applicant request]

7. SOURCE IMPACT ANALYSIS

7.1 Emission Limitations

The proposed combustion turbines and heaters will primarily emit the following PSD pollutants (Table 212.400-2): 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.

7.2 Emission Summary and Contemporaneous Emission Evaluation

The proposed 340 MW Simple Cycle project netted out of PSD review pursuant to Rule 62.212.400(2) (e) F.A.C., Net Emissions Increases. The net emissions increase/decrease for all PSD criteria pollutants as a result of this modification are calculated below:

CONTEMPORANEOUS CREDITABLE CHANGES (TPY)

Pollutants	Past Changes (Repowering & Foggers) (a)	Future Changes (Two turbines SC) (b)	Total Changes All projects (c)	PSD Significance	PSD Review?
PM/PM_{10}	-293	91	-202	25/15	No
SAM	-894	4	-890	7	No
SO_2	-20,400	91	-20,309	40	No
NO_X	-5,217	741	-4,476	40	No
VOC	36	26	62	40	Yes
CO	-238	280	42	100	No

(a) Past Emissions Decreases: Repowering , Foggers Projects
(b) Future Potential Emissions: 340 MW Simple Cycle Project Potential Emissions
(c) Total Changes: Repowering, Foggers, Simple Cycle CTs Projects

7.3 Air Quality Analysis

The proposed project (when considering contemporaneous changes) will not result in the increase of emissions of any PSD pollutants at levels in excess of significant amounts with the exception of VOC emissions. FPL, however, conducted a significant impact analysis of the project without taking credit for the emissions reductions. According to the modeling, all impacts are less than the respective Class II significant impact levels that would otherwise require more refined modeling. These analyses are shown in the following table.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY

Pollutant	Averaging Time	Max Predicted Impact (ug/m^3)	Significant Impact Level (ug/m^3)	Significant Impact?
PM_{10}	Annual	0.013	1	NO
	24-hour	0.15	5	NO
CO	8-hour	1.46	500	NO
	1-hour	5.62	2000	NO
NO_2	Annual	0.16	1	NO
SO_2	Annual	0.049	1	NO
	24-hour	0.68	5	NO
	3-hour	2.50	25	NO

Potential emissions of VOC are only 26 TPY but greater than 40 TPY when considering contemporaneous increases. The Applicant presented the potential increases to the Department and EPA, and discussed options available to predict potential impacts associated with the emissions of VOC and formation of ozone. Based on the available information, the Department has determined that the use of regional models which incorporate the complex chemical mechanisms for predicting ozone formation are not feasible for this project.

7.4 Analysis Impacts On Soils, Vegetation, And Wildlife

The maximum ground-level concentration increases predicted to occur for PM_{10}, CO, SO_2, and NO_X as a result of the proposed project, are all less than the Class II significant impact levels. The beneficial effects of the contemporaneous repowering project far exceed the insignificant impacts of this project. Additionally the additional emissions of VOC are not expected to impact these parameters in any meaningful manner.

7.5 Impact On Visibility

The project will have some effect on visibility. However visibility should greatly improve as a result of the contemporaneous repowering project. The stack visible emissions limits of 10 percent opacity for the repowering project and the simple cycle project compared with present limits as high as 40 percent (refer back to Figure 3) will further insure an improvement.

7.6 Growth-Related Air Quality Impacts

The proposed project is being constructed to meet current and future statewide electric demands. Additional significant growth in the immediate area as a direct result of the additional electric power provided by the project is not expected. The project will be constructed and operated with minimum labor and associated facilities and is not expected to significantly affect growth in the local area. Obviously any increase in highly efficient electric power capacity promotes or accommodates further statewide growth.

8. 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
A. A. Linero, P.E.
Chris Carlson, Meteorologist

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PERMITTEE:

Florida Power & Light Company
Fort Myers Power Plant
Post Office Box 430
Fort Myers, Florida 33905

Permit No.	0710002-009AC and PSD-FL-298
Project:	340 MW Simple Cycle Project
SIC No.	4911
Expires:	December 31, 2002

Authorized Representative:

William Reichel
Plant General Manager

PROJECT AND LOCATION:

Permit to install two dual fuel simple cycle units to generate additional power. Each unit is a 170-megawatt General Electric MS7241FA gas-fired combustion turbine-generator with an 80-foot stack. The project also includes two natural gas heaters with 30-foot stacks.

This facility is located at 10650 State Road 80 near Tice, Lee County. UTM coordinates are: Zone 17; 422.3 km E and 2,952.9 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 BD — BACT Determination

Howard L. Rhodes, Director
Division of Air Resources
Management

FACILITY DESCRIPTION

Currently, this facility generates electric power from two residual fuel oil-fired steam units with a combined generating capacity of 593 megawatts (MW) and 12 distillate fuel oil-fired simple cycle combustion turbines with a combined generating capacity of 708 MW. A permit was issued in 1998 to install six combined cycle units and ancillary equipment to replace the above mentioned existing residual oil-fired steam generating units (nominal 1500 MW Repowering Project).

The proposed new project is to install two simple cycle units with 80-foot stacks. Each unit is a 170-megawatt General Electric PG7241FA gas-fired combustion turbine-generator to be operated on a continuous basis (8760 hours per year). The project also includes two heaters with 30-foot stacks to heat the natural gas. Inherently clean fuels and good combustion practices will be employed to control all pollutants.

This project is subject to the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) only for volatile organic compounds (VOC) as discussed in the Technical Evaluation and Preliminary Determination dated October 26, 2000.

EMISSION UNITS

This permit addresses the following emission units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
027 – 028	Power Generation	Two Simple Cycle Combustion Turbine-Generators
029 - 030	Fuel Heating	Two Natural Gas Heaters

REGULATORY CLASSIFICATION

This facility, FPL Fort Myers Power Plant, 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/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (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).

This facility is a major source of hazardous air pollutants (HAPs) and is also subject to the provisions of Title IV, Acid Rain, Clean Air Act as amended in 1990.

PERMIT SCHEDULE

- X/XX/00 Notice of Intent published in the Fort Myers News-Press
- 10/26/00 Distributed Intent to Issue Permit
- 09/26/00 Application completed
- 08/10/00 Received Application

RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action, but not all are incorporated into this permit. These documents are on file with the Department.

- Application received on August 10, 2000
- Department's letter dated August 24, 2000
- Department's Intent to Issue and Public Notice Package dated October 26, 2000.
- EPA comments dated __________, 2000.
- FPL's comments dated _________, 2000.
- FPL's submittal of revised Phase II Acid Rain application dated _________, 2000

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the *Permitting Authority*: Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114. All documents related to reports, tests, and notifications should be submitted to the *Compliance Authority*: DEP South District office, 2295 Victoria Avenue, Suite 364, Ft. Myers, Florida 33902-3381 and phone number 941/332-6975.

2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]

5. Modifications: The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change. [Chapters 62-210 and 62-212, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Permit Expiration Date Extension: This permit expires on December 31, 2002. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. [Rule 62-4.080, F.A.C.].

8. PSD Approval to Construct Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)]

9. BACT Determination: In accordance with Rule 62-212.400(6)(b), F.A.C. (and 40 CFR 51.166(j)(4)), the Best Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a plant conversion. This paragraph states: "For phased construction project, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." This reassessment will also be conducted for this project if

there are any increases in heat input limits, hours of operation, oil firing, low or baseload operation (e.g. conversion to combined-cycle operation) short-term or annual emission limits, annual fuel heat input limits or similar changes. [40 CFR 51.166(j)(4) and Rule 62-212.400(6)(b), F.A.C.]

10. Application for Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the Region 4 office of the U.S. Environmental Protection Agency in Atlanta, Georgia and a copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]

11. Title V Permit: This permit authorizes construction of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for routine operation of the permitted emissions units. The permittee shall apply for and obtain a Title V operation permit in accordance with Rule 62-213.420, F.A.C. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation and a copy to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSIONS AND CONTROLS

12. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

13. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

14. Excess Emissions Allowed and Prohibited: Refer to Section III, Specific Conditions 22-24. [Rule 62-210.700(4), F.A.C.]

15. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify the Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

16. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the combustion turbine and pollution control system in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as method of minimizing excess emissions. [Rule 62-4.070(3) F.A.C.]

TESTING REQUIREMENTS

17. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]

18. Calculation of Emission Rate: For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

19. Applicable Test Procedures

    (a) *Required Sampling Time.* Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes. The minimum observation period for a visible emissions compliance test shall be sixty (60) minutes. The observation period shall include the period during which the highest opacity can reasonably be expected to occur. [Rule 62-297.310(4)(a)1. and 2., F.A.C.]

    (b) *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet. [Rule 62-297.310(4)(b), F.A.C.]

    (c) *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C. [Rule 62-297.310(4)(d), F.A.C.]

20. Determination of Process Variables

    (a) *Required Equipment.* The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards. [Rule 62-297.310(5)(a), F.A.C.]

    (b) *Accuracy of Equipment.* Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5)(b), F.A.C.]

21. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

22. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

RECORDS

23. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

REPORTS

24. Emissions Performance Test Results Reports: A report indicating the results of any required emissions performance test shall be submitted to the *Compliance Authority* no later than 45 days after completion of the last test run. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.].

25. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the *Compliance Authority*: DEP's South District office by March 1st of each year. [Rule 62-210.370(2), F.A.C]

26. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) and 60.334 (2000 version), shall be submitted to the *Compliance Authority*: DEP's South District office.

APPLICABLE STANDARDS AND REGULATIONS:

1. Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable provisions of the Code of Federal Regulations Section 40, Parts 60, 72, 73, and 75.

2. Applicable Requirements: Issuance of a permit does not relieve the owner or operator of an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law, notwithstanding that these applicable requirements are not explicitly stated in this permit. In cases where there is an ambiguity or conflict in the specific conditions of this permit with any of the above-mentioned regulations, the more stringent state, federal or local requirement applies. [Rules 62-204.800; 62-4.070(3), and Rule 62-210.300, F.A.C.]

3. NSPS Requirement - Subpart A: These emission units shall comply with all applicable provisions of 40CFR60, Subpart A, General Provisions including:
   - 40CFR60.7, Notification and Recordkeeping
   - 40CFR60.8, Performance Tests
   - 40CFR60.11, Compliance with Standards and Maintenance Requirements
   - 40CFR60.12, Circumvention
   - 40CFR60.13, Monitoring Requirements
   - 40CFR60.19, General Notification and Reporting requirements

4. NSPS Requirement - Subpart GG : ARMS Emission Units 027 and 028, Power Generation, consisting of two (nominal) 170 MW combustion turbines (340 MW in Simple cycle operation), shall comply with all applicable provisions of 40CFR60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not required to demonstrate compliance with non-NSPS permit standard(s).

5. Applicable Requirements for ARMS Emission Unit 029 and 030: Natural Gas Heater (s), shall comply with applicable specific conditions as stated below.

GENERAL OPERATION REQUIREMENTS AND CONTROL TECHNOLOGY

6. Fuels: Only pipeline natural gas (sulfur content of 2 grain per 100 standard cubic foot) and No. 2 Fuel oil (0.05% S content) or superior grade fuel oil shall be fired in these units. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

7. Turbine Capacity: The maximum heat input rates, based on the lower heating value (LHV) of the fuel to *each* combustion turbine at compressor inlet conditions of 59°F, 60% relative humidity and 14.7 psia shall not exceed: 1,600 (gas-baseload), 1,680 [(gas-high power mode (HPM)], 1,811 (oil-baseload) million Btu per hour (mmBtu/hr).

This maximum heat input rate will vary depending upon turbine inlet conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other compressor inlet conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing.
[Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

8. Gas-Fired Heaters. The maximum heat input rate, based on the lower heating value (LHV) of the fuel to the gas-fired heaters at ambient conditions of 59°F, 60% relative humidity, 100% load, and 14.7 psia shall not exceed 100 mmBtu per hour.

9. Simple Cycle Mode Operation Only: Each combustion turbine shall operate only in simple cycle mode. Any request to convert these units to combined cycle operation or increase the allowable hours of operation in any other mode of operation shall be approved by the Department through a permit modification in accordance with Chapters 62-210 and 62-212, F.A.C.
[Applicant Request; Rules 62-210.300 and 62-212.400, F.A.C.]

10. Alternate Gas Firing Methods of Operation: High Power Mode (HPM)

    a. Power Augmentation Mode: In accordance with the manufacturer's recommendations, steam may be injected into each combustion turbine when firing natural gas to provide additional peaking power during periods of high electrical power demand. Each unit shall not exceed 440 hours of power augmentation during any consecutive 12 months. To qualify as "power augmentation mode", the combustion turbine must operate at a load of 95% or greater than that of the manufacturer's maximum base load rate adjusted for the compressor inlet air conditions. Prior to activating and after deactivating the power augmentation mode, the operator shall log the date, time, and new mode of operation. Power augmentation when firing distillate oil is prohibited.

    b. High Temperature Peaking Mode: In accordance with the manufacturer's recommendations, each combustion turbine may be operated in a high temperature peaking mode when firing natural gas to provide additional power during periods of peak electrical power demands. Peaking is achieved through the automated gas turbine control system by allowing slightly higher exhaust temperatures, calculating a new combustion reference temperature for the peak load, and adjusting the fuel distribution between the fuel nozzles to maintain lean pre-mix firing. During the transfer from base load to peak load and during peak load operation, each unit will remain in the per-mix steady state mode. Each unit shall not exceed 60 hours of peaking during any consecutive 12 months. To qualify as "peaking mode", the combustion turbine must operate at a load of 95% or greater than that of the manufacturer's maximum base load rate adjusted for the compressor inlet air conditions. Prior to activating and after deactivating the peaking mode, the operator shall log the date, time, and new mode of operation. Peaking when firing distillate oil is prohibited.

11. Hours of Operation: Each unit is allowed to operate continuously or 8760 hours per year. However each unit is limited to 500 hours per year operation on 0.05 % S (by weight) fuel oil or superior grade oil and 500 hours on high power mode (HPM). [Design, Rules 62-4.070(3) and 62-210.200, F.A.C. (Definitions - Potential Emissions)]

12. Control Technology Dry Low NO_X: Dry Low NO_X (DLN) combustors shall be installed on each stationary combustion turbine to control nitrogen oxides (NO_X) emissions.

13. Emissions Performance Diagrams: The permittee shall provide manufacturer's emissions performance versus load diagrams for the DLN systems prior to their installation. DLN systems shall each be tuned upon initial operation to optimize emissions reductions consistent with normal operation and maintenance practices and shall be maintained to minimize NO_X and CO emissions, consistent with normal operation and maintenance practices. Operation of the DLN systems in the diffusion–firing mode shall be minimized when firing natural gas. [Rule 62-4.070, and 62-210.650 F.A.C.]

14. Control Technology Wet Injection: A wet injection system shall be installed for use when firing No. 2 or superior grade distillate fuel oil for control of NO_X emissions. [Design, Rules 62-4.070 F.A.C.]

EMISSIONS LIMITS AND STANDARDS

15. Following are the emission limits determined for this project assuming full load. Values for NO_X are corrected to 15% O_2 on a dry basis. These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are followed by the applicable specific conditions. [Applicant Requests, Rules 62-204.800(7)(b) (Subparts GG), 62-210.200 (Definitions-Potential Emissions), F.A.C.].

POLLUTANT	CONTROL TECHNOLOGY	EMISSION LIMIT
NO_X	Dry Low NO_X for Natural Gas Wet Injection and limited Fuel Oil usage	10.5 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 42 ppmvd (Fuel Oil)
PM/PM_{10}, VE	Pipeline Natural Gas, Low Sulfur Fuel Oil	10/17 lb/hr (Gas/Fuel Oil) 10 percent Opacity (Gas/Fuel Oil)
VOC (BACT)	As Above	1.5 ppmvd (Gas) 3.5 ppmvw (Fuel Oil)
CO	As Above	9 ppmvd (Gas, Base) 15 ppmvd (Gas, HPM) 20 ppmvd (Fuel Oil)
SO_2 and Acid Mist	As Above	2 gr S/100 ft^3 (in Gas) 0.05% S (in Fuel Oil)

HPM: High Power Modes – (High Temperature Peaking or Steam Power Augmentation)

16. Nitrogen Oxides (NO_X) Emissions:

a. *Gas Firing Base Case:* The concentration of NO_X concentrations in the exhaust gas of each combustion turbine (CT) shall not exceed 10.5 ppmvd at 15%O_2 on a 30-day rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 10.5 ppmvd @15% O_2 nor 69 lb/hr to be demonstrated by stack test as required in Specific Conditions 25 to 30.

b. *Gas Firing High Power Modes (HPM):* The concentration of NO_X concentrations in the exhaust gas of each CT shall not exceed 15 ppmvd at 15%O_2 on a 24-hour rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 15 ppmvd @15% O_2 nor 102 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to30.

c. *Fuel Oil Firing Operation:* The concentration of NO_X concentrations in the exhaust gas of each CT shall not exceed 42 ppmvd at 15%O_2 on a 24-hour rolling average basis as measured by the CEMS (maintained in accordance with 40 CFR 75). In addition, NO_X emissions calculated as NO_2 (at ISO conditions) shall exceed neither 42 ppmvd @15% O_2 nor 320 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

d. *Gas Fired Heaters:* NO_X emission limit from each gas heater shall not exceed 0.010 lb/mmBtu to be demonstrated by stack test as required in Specific Condition 25 to 30.

17. Visible Emissions (VE): VE emissions from each turbine shall not exceed 10 percent opacity while operating in gas or fuel oil. Visible emissions from the gas heaters shall not exceed 10 percent opacity. Stack test shall be conducted as required in Specific Condition 25 to 30.

18. Particulate Matter (PM/PM_{10}): PM/PM_{10} emissions shall not exceed 10 lb/hr when operating on natural gas and shall not exceed 17 lb/hr when operating on fuel oil. [Rule 62-4.070 (3) F.A.C]. Stack test shall be conducted as required in Specific Condition 25 to 30.

19. Carbon Monoxide (CO) emissions :

a. *Gas Firing Base Case:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 9 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 9 ppmvd nor 29 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 29.

b. *Gas Firing High Power Mode (HPM) Operation:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 15 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 15 ppmvd nor 48 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

c. *Fuel Oil Firing:* The concentration of CO concentrations in the exhaust gas of each CT shall not exceed 20 ppmvd. In addition, CO emissions (at ISO conditions) shall exceed neither 20 ppmvd nor 65 lb/hr to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

d. *Gas Fired Heaters:* CO emission limit from each gas heater shall not exceed 0.075 lb/mmBtu to be demonstrated by stack test as required in Specific Condition 25 to 30.

20. Volatile Organic Compounds (VOC) Emissions: The concentration of VOC in the exhaust gas shall not exceed 1.5 ppmvd (gas) 3.5 ppmvw (oil) as determined by EPA Methods 18, 25 or 25 A. VOC emissions (at ISO conditions) shall not exceed 2.8 (gas), 7.3 (oil) lb/hr per CT to be demonstrated by stack test conducted as required in Specific Condition 25 to 30.

21. Sulfur Dioxide (SO_2) and Sulfuric Acid Mist (SAM) Emissions: SO_2 and SAM emissions shall be limited by firing pipeline natural gas (sulfur content less than 2 grain per 100 standard cubic foot) or by firing No. 2 or superior grade distillate fuel oil with a maximum 0.05 percent sulfur. [40CFR60 Subpart GG and Rules 62-4.070, and 62-204.800(7), F.A.C.]

EXCESS EMISSIONS

22. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration. Operation below 50% output shall be limited to two hours in any 24-hour period, regardless of unit cycles (breaker closed to breaker open) [Rules 62-210.700, 62-4.130 F.A.C.].

23. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, power augmentation, high temperature peaking or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. All such emissions shall be included in the 30-day rolling average (gas-base case) or the 24-hr average (oil or HPM) to demonstrate compliance with the continuous NO_X standard. [Rules 62-210.700 (4) F.A.C.].

24. Excess Emissions Report: If excess emissions occur for more than two hours due to malfunction, the owner or operator shall notify DEP's South District office within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the permitted standards listed in Specific Condition No. 15 and 16. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (2000 version)].

COMPLIANCE DETERMINATION

25. Test Compliance Schedule: Compliance tests 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, and annually thereafter as indicated in this permit or as required by the *Compliance Authority*. [40CFR 60.8 and Rule 62-4.070(3) F.A.C.]

26. Initial Performance and Annual Compliance Tests: Initial (I) performance tests (for both fuels)for each unit shall be conducted as indicated in Specific Conditions 29 and 30. Annual (A) compliance tests for each unit shall be conducted during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on each CT as indicated in Specific Conditions 29 and 30. Where *initial test only* are indicated, these tests shall be repeated prior to renewal of each operation permit.

27. Test After Substantial Modifications: Initial tests for each unit shall also be conducted after any substantial modifications and appropriate shake down period of air pollution control equipment such as change or tuning of combustors. Shakedown periods shall not to exceed 100 days after re-starting the combustion turbine. This does not apply to routine maintenance. [Rules 62-297.310(7)(a)4 and 62-4.070(3), F.A.C.]

28. Tests Prior to Permit Renewal: Prior to renewing air operation permits, performance tests shall be conducted for each combustion turbine to demonstrate compliance with the CO, NO_X, PM, VOC and visible emissions standards for normal gas firing, gas firing with power augmentation, gas firing with high temperature peaking, and backup oil firing. Tests for CO, NO_X, and VOC emissions shall be

conducted concurrently. Tests for PM and visible emissions shall be conducted concurrently. All tests shall be conducted within the 12 months prior to renewing the air operation permit.
[Rule 62-297.310(7)(a)3., F.A.C.]

29. Test Methods: The following reference methods as described in 40 CFR 60, Appendix A (2000 version), and adopted by reference in Chapter 62-204.800, F.A.C., shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing pursuant to Rule 62-297.310 (6), F.A.C.

- EPA Reference Method 5 or 17. "Determination of Particulate Emissions from Stationary Sources" (I)
- Method 7E, "Determination of Nitrogen Oxides Emissions from Stationary Sources" or RATA test data may be used to demonstrate compliance for annual (A) test requirements.
- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).
- EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).
- EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60 Subpart GG.
- EPA Reference Method 18, 25 or 25A, "Determination of Volatile Organic Concentrations." Initial test only.
- EPA Reference Method 19. "Determination of Sulfur Dioxide Removal Efficiency and Particulate Matter, Sulfur Dioxide, and Nitrogen Oxides Emission Rates". Method 19 shall be used only for the calculation of lb/mmBtu and 40CFR75 shall be used to calculate mmBtu/hr and lb/hr emissions rates from stack tests. Initial test only.

30. Combustion Turbine Testing Capacity Procedures:

a. *Initial performance tests* shall be conducted in accordance with 40CFR 60.8 and 40 CFR60.335 for pollutants subject to New Source Performance Standards (NSPS) in Subpart GG for gas turbines.

b. *Other required performance tests* for compliance with standards specified in this permit shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum heat input rate allowed by the permit, corrected for the average compressor inlet temperature during the test (with 100 percent represented by a curve depicting heat input vs. compressor inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. compressor inlet temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for compressor inlet temperature) and 110 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Test procedures shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapter 62-204 and 62-297 F.A.C.

c. *For higher operating mode performance tests* conducted when gas firing under the power augmentation mode and under the high temperature peaking mode, the permittee shall document that the combustion turbine was operating under "peak load" for the given ambient conditions. For power augmentation, the steam injection rate shall be no less than 100,000 pounds of steam per hour.

[Rule 62-297.310(2), F.A.C.; 40 CFR 60.335]

31. Compliance with the SO_2 and PM/PM_{10} emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas as the primary fuel and restricted use of No.2 distillate oil (or superior grade) is the method for determining continuous compliance for SO_2 and PM/PM_{10}. Initial PM and upon permit renewal tests are required. VE shall serve as a surrogate for PM/PM_{10} annual compliance test. Test for PM and visible emissions shall be conducted concurrently.

32. Test Methods for Natural Gas and Fuel Oil Sulfur Content: For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard, ASTM D 2880-71(or equivalent) for sulfur content of liquid fuel and ASTM methods D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel and shall be utilized in accordance with the EPA-approved custom fuel monitoring schedules. Natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be submitted when demonstrating compliance for this fuel. However, the applicant is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used when determination of fuel sulfur content is made. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (2000 version)

33. Compliance with Visible Emissions (VE) limits: Initial and annual test is required for visible emissions. Test for PM and visible emissions shall be conducted concurrently.

34. Compliance with CO emission limits: An initial test for CO, shall be conducted concurrently with the initial VOC and NO_X tests while operating at permitted capacity. These initial VOC, NO_X and CO test results shall be the average of three runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual NO_X RATA testing which is performed pursuant to 40 CFR 75.

35. Compliance with the VOC emission limits: Initial and permit renewal compliance stack tests are required to demonstrate compliance with the VOC emission limit. CO emission limit and periodic tuning data will be employed as a surrogate and no annual testing is required.

36. Compliance with the NO_X limits: Compliance with emissions the NO_X emissions limits shall be determined by stack tests and a CEMS as specified in specific conditions No. 29, 44, and 45.

NOTIFICATION, REPORTING, AND RECORDKEEPING

37. Notifications: All notifications and reports required by any applicable requirements of 40 CFR Subpart A and GG shall be submitted to the DEP's South District office.

38. Reports and Records: These units facility shall also comply with all the record and report requirements specified in Section II, Specific Conditions No 23 through 26.

39. Monthly Operations Record Summary: By the fifth calendar day of each month, the permittee shall record the hours of each mode of operation and the fuel consumption for each combustion turbine. The information shall be recorded in a written or electronic log and shall summarize the previous month of operation and the previous 12 months of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request from the DEP South District Office. [Rule 62-4.160(15), F.A.C.]

40. Fuel Records: The permittee shall demonstrate compliance with the fuel sulfur limits specified in this permit by maintaining the following records of the sulfur contents.

    a The permittee shall obtain data sheets from the vendor indicating the average sulfur content of the natural gas being supplied by the pipeline for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or equivalent methods as specified in Specific Condition 32.

    b The permittee shall obtain data sheets from the vendor indicating the quantity and sulfur content of the distillate oil for each shipment delivered. Methods for determining the sulfur content of distillate oil shall be ASTM D 2880-71 or equivalent methods as specified in Specific Condition 32.

MONITORING REQUIREMENTS

41. Continuous Monitoring System Procedures: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the NO_X emissions from each CT. Each device shall properly function prior to the initial performance tests and comply with the applicable monitoring system requirements of 40 CFR 75.62. Upon request from DEP, the CEMS emission rates for NO_X on each CT shall be corrected to ISO conditions to demonstrate compliance with the NO_X standard established in 40 CFR 60.332.
    [Rules 62-4.070 F.A.C., 62-210.700, F.A.C., 62-4.130, F.A.C and 40CFR75]

42. Continuous Monitoring Certification and Quality Assurance Requirements: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40CFR75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62

43. Continuous Monitoring System Operation: The continuous monitoring systems (CEMS) for NO_X shall be in continuous operation except for breakdowns, repairs, calibration checks, and zero and span adjustments. Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data average. These CEMS shall meet minimum frequency of operation requirements: one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Valid hourly emission rates shall not include periods of startup, shutdown, or malfunction unless prohibited by 62-210.700 F.A.C. These excess emissions periods shall be reported as require in Specific Conditions 24 and 46. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 60.13, 40 CFR 75]

44. Continuous Compliance with the NO_X Emission Limits – *Base Case Operation*: Continuous compliance with the NO_X emission limits shall be demonstrated with the CEM system based on a 30-day rolling average. Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new 30 day average emission rate is calculated from the arithmetic average of all valid hourly emission rates during the previous 30 operating days. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 75]

45. Continuous Compliance with the NO_X Emission Limits - *Alternate Methods of Operation*:. Each 1-hour monitoring average consisting of any data collected during an alternate method of operation (*oil firing, power augmentation, or peaking*) shall be attributed entirely to the alternate method of operation. For each 24-hour average consisting of more than one method of operation, compliance shall be determined by prorating each emission standard based on the number of 1-hour averages represented. In event of a CEMS malfunction or occurrence of excess emissions while operating in the power augmentation or peaking modes, the permittee shall immediately cease power augmentation or peaking and revert to normal gas firing or shut down the combustion turbine. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart. [Rules 62-4.130, 62-4.160(8), 62-204.800, 62-210.700, 62-4.070 (3), and 62-297.520, F.A.C.; 40 CFR 60.7; 40 CFR 75]

46. CEMS for Reporting Excess Emissions: The NO_X CEMS may be used in lieu of the requirement for reporting excess emissions in 40 CFR 60.334(c)(1), Subpart GG (2000 version). Excess Emissions and Monitoring System Performance Reports shall be submitted as specified in 40 CFR 60.7(c). CEM monitor downtime shall be calculated and reported according to the requirements of 40 CFR 60.7(c)(3) and 40 CFR 60.7(d)(2). Periods when NO_X emissions (ppmvd @ 15 % oxygen) are above the permit limits listed in Specific Conditions 15 and 16, shall be reported to the DEP South District office as required in Specific Condition 24.

47. CEMS in lieu of Water to Fuel Ratio: The NO_X CEMS shall be used in lieu of the water/fuel monitoring system for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (2000 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (2000 version) will be replaced by the 40 CFR 75 certification tests of the NO_X CEMS.

48. Natural Gas Monitoring Schedule: The following custom monitoring schedule for natural gas is approved in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2):

- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative (DR), that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- Each unit shall be monitored for SO_2 emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

49. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a) Have access to and copy and records that must be kept under the conditions of the permit;
b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a) A description of and cause of non-compliance; and
b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

a) Determination of Best Available Control Technology ( )
b) Determination of Prevention of Significant Deterioration non-applicablity (X); and
c) Compliance with New Source Performance Standards (X).

G.14 The permittee shall comply with the following:

a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Memorandum

Florida Department of Environmental Protection

TO: ~~C. H. Fancy~~

THRU: A. A. Linero AAL 10/25

FROM: Teresa Heron T.H.

DATE: October 24, 2000

SUBJECT: FPL Ft. Myers 340 MW Simple Cycle Project
DEP File No. 0710002-009-AC and PSD-Fl-298

Attached is the draft public notice package including the Intent to Issue and the Technical Evaluation and Preliminary Determination for the Ft. Myers Simple Cycle Combustion Turbine Project. The application is for installation of two simple cycle units to provide additional power at the Fort Myers Plant.

Each unit is a 170 MW General Electric MS7241FA gas-fired combustion turbine-generator. The project also includes two heaters to heat the natural gas prior to use and individual stacks for each emission unit.

Each unit will be allowed to operate 8760 hours per year including 500 hours in high power mode (HPM) and 500 hours on fuel oil. NOX and CO emissions will be controlled by DLN-2.6 combustors capable of achieving 9 ppmvd for each pollutant while firing natural gas. Permitted emissions will be as follows in ppmvd.

Case	NO_X	CO	VOC (BACT)
Base (natural gas)	10.5	9	1.5
High Power Mode	15	15	1.5
Fuel Oil	42	20	3.5

Emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM), and particulate matter (PM/PM_{10}) will be very low because of the inherently clean pipeline quality natural gas and few hours of operation on fuel oil.

We have determined on a preliminary basis that the project nets out of PSD for all pollutants (except for VOC) because of the very substantial emissions reductions resulting from the on-going repowering project at the site.

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

AAL/th

Attachments

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

P.E. Certification Statement

Permittee: **DEP File No.** 0710002-009-AC

Florida Power & Light Company
FPL Fort Myers Plant
Lee County

Project type:

Project is construction of two 170-megawatt GE PG7241FA gas and oil-fired simple cycle combustion turbine-electrical generators with 80-foot stacks and gas heaters. Units will be permitted to operate (continuously) 8760 hours per year of which 500 hours per unit may be on No. 2 distillate fuel oil and 500 hours may be at high power modes.

Because of contemporaneous emissions reductions from an on-going repowering project at the site, the proposed project "nets out" of PSD for all pollutants except VOC. The BACT emission limits for VOC are 1.5 ppmvd while firing natural gas and 3.5 ppmvw while firing fuel oil. The continuous (30-day) NO_X limits are 10.5 ppmvd when operating on natural gas and 42 ppmvd by wet injection when burning fuel oil. Other pollutants, including particulate matter (PM/PM_{10}), carbon monoxide, volatile organic compounds, sulfur dioxide, and sulfuric acid mist will be controlled by good combustion and use of clean fuels.

Ambient air pollutant concentration increases caused by the project will be less than the respective "significant impact levels." Impacts due to the proposed project together with the repowering project all favorable and the net effect is a "creation of available SO_2 and NO_X increment" in the PSD Class I (Everglades) and Class II areas.

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

A. A. Linero, P.E. — 10/26/00
Registration Number: 26032 — Date

Bureau of Air Regulation
New Source Review Section
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Phone (850) 921-9523
Fax (850) 922-6979

A. A. LINERO
CERTIFICATE
NO. 26032
STATE OF
FLORIDA
REGISTERED ENGINEER
aaf 10/26

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

September 19, 2000

9937613A/01

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

RECEIVED
SEP 26 2000
BUREAU OF AIR REGULATION

RE: FPL FORT MYERS PLANT
DEP FILE NO. 0710002-009-AC (PSD-FL-286)
SIMPLE CYCLE GE FRAME 7FA COMBUSTION TURBINES
REQUEST FOR ADDITIONAL INFORMATION

Attention: Ms. Teresa Heron

Dear Teresa:

This correspondence provides the additional information requested in the Department's August 24, 2000 letter concerning FPL's Fort Myers Peaking Project. The information is provided in the same format as requested.

1. Question: Pursuant to Rule 62-210.400(2) (e) 3. F.A.C, please resubmit the emissions netting calculation (each permitted unit actual emissions) considering the adequate contemporaneous period (creditable increases/decreases) for this modification. Refer to attached EPA memos.

Response: Table 1 attached presents the net emissions calculations for the Fort Myers Plant. The table was developed in order of that the projects have occurred so that the sequence of the net emissions can be evaluated. First, the actual emissions were established for the Fort Myers Repowering Project. These emissions were the actual emissions for Fort Myers Units 1 and 2, which were fired exclusively with residual oil. The Fort Myers Repowering Project consisted of replacing these steam units with natural gas fired combined cycle units. These emissions are shown as the combined cycle unit emissions. The project also included a cooling tower, which is also shown in the table. PSD was not applicable to the project with an air construction permit issued by the Department in late 1998. The net emissions resulting from this project are shown in the table as Net Emission #1. The second project was the addition of foggers to the existing simple cycle CTs. PSD was also not applicable to this project and the Department issued an air construction permit in mid-1999. The net emissions resulting from this project are shown in table as Net Emission #2. The third project is the proposed simple cycle CT units. As noted from the application and Table 1, PSD is applicable to VOC emissions.

The EPA guidance attached to the Department's letter is based on both Appendix S of 40 CFR Part 51 and 40 CFR 52.21. The Department's rules in Chapter 62-212, which govern the PSD review for the proposed project, are very similar. These rules are discussed in detail below.

Since the project is located at a major facility, the proposed project would be "modification" under the PSD rules promulgated by the Department if the net emissions increases exceed the PSD significant emission rates (Table 212.400-2). Whether the project is a modification is determined if a net emissions increase occurs as outlined by Rule 62-212.400(2)(e)1.:

"A modification to a facility results in a net emissions increase when, for a pollutant regulated under the Act, the sum of all of the contemporaneous creditable increases and decreases in the actual emissions of the facility, including the increase in emissions of the modification itself and any increases and decreases in quantifiable fugitive emissions, is greater than zero."

Thus, in determining the net emissions, any increases and decreases must be both contemporaneous and creditable.

The determination of whether emissions are contemporaneous is based on Rule 62-212.400(2)(e)3.:

> "An increase or decrease in the actual emissions or in the quantifiable fugitive emissions of a facility is contemporaneous with a particular modification if it occurs within the period beginning five years prior to the date on which the owner or operator of the facility submits a complete application for a permit to modify the facility and ending on the date on which the owner or operator of the modified facility projects the new or modified emissions unit(s) to begin operation. The date on which any increase in the actual emissions or in the quantifiable fugitive emissions of the facility occurs is the date on which the owner or operator of the facility begins, or projects to begin, operation of the emissions unit(s) resulting in the increase. The date on which any decrease in the actual emissions or in the quantifiable fugitive emissions of the facility occurs is the date on which the owner or operator of the facility completes, or is committed to complete through a federally enforceable permit condition, a physical change in or change in the method of operation of the facility resulting in the decrease."

The decreases from the Fort Myers Repowering Project are contemporaneous with the simple cycle CTs since they are within the 5 years prior when a complete application is submitted for the simple cycle CT project. The decrease in actual emissions is through a federally enforceable construction permit and these annual emissions decreases from existing Units 1 and 2 will be realized before the annual emissions from the new simple cycle project begin.

Whether the increase or decrease is creditable is based on Rule 62-212.400(2)(e)4.:

"a. An increase or decrease in the actual emissions or in the quantifiable fugitive emissions of a facility is creditable if:

(i) The Department has not relied on it in issuing a permit under the provisions of Rule 17-2.500 (transferred), or 62-212.400, F.A.C., or EPA has not relied on it in issuing a permit under the provisions of 40 CFR 52.21, which permit is in effect when the increase in emissions of the modification occurs; and

(ii) The Department has not relied on it in demonstrating attainment, defining reasonable further progress, or issuing a permit under the provisions of Rule 17-2.17 (repealed), 17-2.510 (transferred), 17-2.650 (transferred), 62-212.500, or 62-296.500 through 62-296.516, F.A.C., which permit is in effect when the increase in emissions of the modification occurs.

b. An increase or decrease in the actual emissions or in the quantifiable fugitive emissions of sulfur dioxide, nitrogen dioxide, or particulate matter which occurs before the applicable minor source baseline date is creditable only to the extent that it must be considered in calculating the amount of any maximum allowable increase in ambient concentration remaining available. With respect to particulate matter, only PM_{10} emissions shall be used to evaluate the net emissions increase of PM_{10}.

c. A decrease in the actual emissions or in the quantifiable fugitive emissions of a facility is creditable only if:

(i) The old level of actual emissions, the old level of federally enforceable allowable emissions, or the old level of allowable emissions under Rule 62-296.500 through 62-296.516, 62-296.570, 62-296.600 through 605, or 62-296.700 through 62-296.712, F.A.C., whichever is lowest, exceeds the new level of actual emissions;

(ii) It is federally enforceable on and after the date that the owner or operator obtains from the Department a permit to construct the new or modified facility; and

(iii) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase in the emissions of the modification."

For all these criteria, the decrease in emissions resulting from the Fort Myers Repowering Project are creditable to the proposed simple cycle project. A PSD was not applicable to the Repowering Project and the emissions reduction was not required to demonstrate compliance with reasonable further progress. The emissions reductions were based on the difference of the old actual emissions and the new repowered plant's potential emissions. The reductions were made federally enforceable through an air construction permit that is effective on the date when the new CTs would obtain a permit from the Department. Also, as shown through the modeling evaluations the impacts resulting from the Repowering Project including the proposed new simple cycle CTs are much less than those of the existing units.

2. Question: How were actual emissions calculated? State the basis of calculations. If any of the pollutants exceed the PSD significant threshold level due to the new calculations, please submit the appropriate BACT analysis for that pollutant.

Response: The basis for the net emissions resulting from Fort Myers Repowering Project was contained in detail in the application for that project. These were based on the actual emissions for the facility and identified in the Department's Intent to Issue the Air Construction Permit. The NO_x and SO were based on data from the CEM, the PM data was based on stack tests, CO was based on stack test data from identical units, and VOC data was based on AP-42 emissions data.

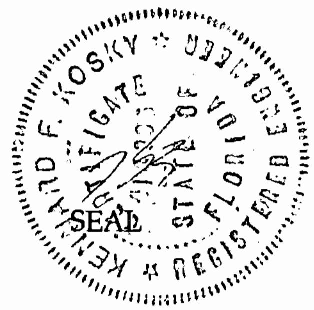
3. Question: Were these two simple cycle turbines considered in the initial plan of the 1998 project? Is there another future phase for this facility's repowering project?

Response: No. The simple cycle turbines were not considered in the initial plan of the 1998 project. The Repowering Project and the proposed simple cycle project are for two different purposes and identified separately. The need for the Fort Myers Repowering Project was identified in 1998 to provide the most efficient baseload electric power for the FPL system. In contrast, the need for new simple cycle units was identified in 1999 based on the increase in peak demand of electric power. At the present time, no additional units are planned for the Fort Myers Plant. However, as the only power facility in growing Southwest Florida area, future demand may require additional units in the region with the Fort Myers Plant as a potential site.

Please call if there are any technical questions on the application. Your assistance is always appreciated.

Sincerely,

Kennard F. Kosky



Kennard F. Kosky, P.E.
Principal
Florida Registered Engineer No. 14996

KFK/jkw

Enclosure

cc: Rich Piper, FPL
J. Heron
C. Carlson
D. Knowles, SD
B. Worley, EPA
J. Bunyak, NPS

Table 1. Net Emission Increases and Decreases - Fort Myers Plant

	Particulate	Nitrogen Oxides	Sulfur Dioxides	Carbon Monoxide	Volatile Organic Compounds
Past Actual Emissions	607	7,095	20,561	1,507	47
Repowered Plant					
Combined Cycle Units	267	1,845	137	1,267	82
Cooling Tower	46				
Net Emissions Change #1	-295	-5,250	-20,424	-240	36
Foggers	1.82	33.5	24.24	2.3	0.82
Net Emissions Change #2	-293	-5,217	-20,400	-238	36
Simple Cycle CTs	91	741	91.2	280	26
Net Emissions Change #3	-201.68	-4,475.50	-20,308.56	42.30	62.32
PSD Significant Emission Rates:	15	40	40	100	40

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 24, 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
Simple Cycle GE Frame 7A Combustion Turbines
DEP File No. PSD-FL-298 and 0710002-009-AC

Dear Mr. Reichel:

On August 10, 2000 the Department received your application and complete fee for an air construction permit for the construction of two (2) simple cycle combustion turbines at the above reference facility. Based on our initial review, the application is incomplete. Pursuant to Rules 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C., please submit the information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Pursuant to Rule 62-210.400(2) (e) 3. F.A.C, please resubmit the emissions netting calculation (each permitted unit actual emissions) considering the adequate contemporaneous period (creditable increases/decreases) for this modification. Refer to attached EPA memos.
2. How were actual emissions calculated? State the basis of calculations. If any of the pollutants exceed the PSD significant threshold level due to the new calculations, please submit the appropriate BACT analysis for that pollutant.
3. Were these two simple cycle turbines considered in the initial plan of the 1998 project? Is there another future phase for this facility's repowering project?

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

If you have any questions regarding this matter, please call Teresa Heron at 850/921-9529 or e-mail her at teresa.heron@dep.state.fl.us.

Sincerely,

A.A. Linero, P.E. Administrator
New Source Review Section

Cc: David Knowles, DEP SD
Richard Piper, FPL
Gregg Worley, EPA
John Bunyak, NPS
Ken Kosky, P.E., Golder

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 1453 2511

Article Sent To:
Mr. William Reichel - FPL Ft. Myers

8/24/00

Postage	$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	$	

Name (Please Print Clearly) (to be completed by mailer)
Mr. William Reichel, Gen. Mgr.
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+4
Fort Myers, FL 33905

PS Form 3800, July 1999 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* JOAN R SMOAK
B. Date of Delivery 8-29-00

C. Signature
X Joan R Smoak ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2511

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

3.33

January 12, 1989

Mr. Michael J. Hayes, Manager
Division of Air Pollution Control
Illinois Environmental Protection Agency
Post Office Box 19276
Springfield, Illinois 62794-9276

Dear Mr. Hayes:

This is in response to your letters of August 17, 1988 and September 9, 1988, requesting guidance on several issues related to determining applicability of new major source regulations in the granting of construction permits to sources of air emissions. These issues arose as a result of CPC International's "Argo II Rebuild Project Phase II" in Bedford Park, Illinois.

The questions you asked concern the following issues:

1. What definitions should be used to determine whether the CPC Phase II Rebuild Project is a major modification?

2. If the Phase II project in and of itself does not represent an increase in emissions, much less a significant increase, should contemporaneous and creditable emission increases and decreases determine whether a major modification has occurred?

3. How would netting provisions in the regulations apply to the CPC situation?

These questions were discussed in a telephone conversation on August 17, 1988, in which Gary McCutchen of my office concurred with the positions previously taken by the Environmental Protection Agency (EPA), Region V, but stated that he would consider the matter further upon receipt of a written request for guidance. The Office of Air Quality Planning and Standards (OAQPS) had a chance to review your letters. As a result, this office reiterates the positions we have taken before.

Background Information

Before responding to your specific questions, it may be helpful to summarize key modifications at CPC that resulted in changes in particulate matter emissions. In 1981, CPC reportedly decreased its particulate emissions by 262 tons per year (tpy). In 1985, it constructed the "Phase I Rebuild Project" which increased particulate emissions by 49.5 tpy. This increase was netted against the prior 262 tpy decrease achieved in 1981, so that the Phase I project was not subject to major new source permitting requirements (i.e., the net emissions increase was less than the de minimis emission rate of 25 tpy).

Construction of the Phase II project began in 1986, but the company did not get a construction permit until June 1988. The permit that was issued was a minor source permit. Prior to the Phase II project, CPC emitted approximately 600 tpy of particulate matter. It was, therefore, a major stationary source. In Phase II, certain pieces of obsolete equipment were shut down, reportedly reducing emissions by about 600 tpy, but new equipment was added at the same time. The new equipment resulted in an increase in emissions of approximately 600 tpy.

Question 1:

What definitions should be used to determine whether the CPC Phase II Rebuild Project is a "major modification"?

As a preliminary matter, when making a major source applicability determination, a permitting agency must base the determination on "major" source definitions, not on "minor" source definitions. The specific definitions to use in making an applicability determination are found in the specific new source review (NSR) regulations under which the proposed new construction or modification is reviewed. The area of Bedford Park, Illinois, is nonattainment for total suspended particulate (TSP), and Illinois does not have approved Part D NSR requirements in its State implementation plan. For this reason, 40 CFR Part 51, Appendix S, Emission Offset Interpretative Ruling, applies to new major stationary sources and major modifications to existing sources of TSP in that area.

The CPC also emits PM10. Since Bedford Park is attainment for PM10, prevention of significant deterioration (PSD) requirements found at 40 CFR Part 52.21 also apply. Therefore, CPS is subject to the definitions contained in Appendix S (for TSP purposes) and in Part 52.21 (for PM10 purposes).

Question 2:

If the Phase II project in and of itself does not represent an increase in emissions, much less a significant increase, should contemporaneous and creditable emissions increases and decreases determine whether a major modification has occurred?

Because the Phase II Rebuild Project was to result in an increase in emissions of approximately 600 tpy of particulate matter, the change is "significant" (i.e., greater than 25 tpy) and should be scrutinized for applicability to new source requirements using the definitions of "major modification" in 40 CFR Part 51, Appendix S and Part 52.21. Whether a change is "significant" is determined before any netting calculation is done.

A determination as to whether a significant change is a "major modification," as defined at 40 CFR Part 51, Appendix S, II.A.10, requires a decision as to whether the change has resulted in a "significant" net emissions increase (i.e., greater than or equal to 25 tpy for particulate matter). The definition of "net emissions increase" in Appendix S mandates a calculation of all creditable increases and decreases which occurred during the contemporaneous time period and specifies that time period. It begins 5 years before the date construction "commenced" on the project and ends on the date the emissions increase from the particular modification occurs (if after the commencement date). A necessary condition for establishing the commencement date is that the owner or operator has all necessary preconstruction approvals or permits. The Phase II Project was permitted in June 1988; consequently, the contemporaneous time period began in June 1983. How each of the increases and decreases in emissions is taken into account to determine if the change will result in a major modification is discussed in the response to your third question.

Question 3:

How would netting provisions in the regulations apply to the CPC situation?

The mechanics of performing the netting calculation, once the contemporaneous time period has been established, can be found in the definition of "net emissions increase" at 40 CFR Parts 51.165(a)(1)(vi); 51.166(B)(3); Appendix S, section II.A.6; and 52.21(b)(3). The definitions specifically state:

> . . . an increase or decrease in actual emissions is creditable only if the Administrator has not relied on it in issuing a permit for the source under this section, which permit is in effect when the increase in actual emissions from the particular change occurs.

The preamble to the 1980 PSD regulations at 45 FR 52701 explains that the:

> . . . prior increase or decrease is creditable only if the relevant reviewing authority has not relied upon it in issuing a permit under the relevant NSR program . . .

As such, EPA's policy is that any prior increase or decrease that has been used in issuing a previous major source permit has been "relied" upon, and therefore cannot be creditable to a subsequent increase. However, emissions increases or decreases that have been used by a source only to net out of review (versus those used in NSR review) have not been "relied" upon and are, therefore, still subject to further consideration. In other words, if a source is able to net out of review, the increase in emissions that triggered the netting action will not have been subject to NSR. Its effect on increments and ambient air quality would not have been determined, and it would only be determined if it happens to fall in a contemporaneous time period of a subsequent project that is determined to be a major new source or major modification. Once included in a major NSR action, the increase that originally netted out of review, but was later subjected to it, will not be subject to review again (i.e., the slate is wiped clean). Similarly, if no major modifications are made for 5 years after the source that netted out of review received its permit, then the slate is wiped clean.

For the reasons stated above, we reaffirm the guidance that Region V and OAQPS conveyed in previous discussions with you. Each netting transaction involves a "snapshot" of the creditable emissions increases and decreases within the applicable contemporaneous time period. Emissions reductions that have occurred prior to the current contemporaneous time period are not creditable, even though they may have been used to allow one or more individual increases which are still inside the current contemporaneous time period to net out of review. To consider netting transactions that involve emission increases and decreases which occur outside of the current contemporaneous time period would effectively lengthen the contemporaneous time period to greater than 5 years. This is contrary to the existing NSR regulations. Any increases that occur inside the current contemporaneous time period are not double counted as you have alluded, because they will never be subjected to NSR more than once.

The netting calculation for the Phase II project starts with the 600 tpy increase from the new equipment. It is not clear that the 600 tpy decrease that occurred simultaneously with the 600 tpy increase is creditable because of issues concerning the requirement that the decrease be federally enforceable at the time actual construction commenced, but if we assume that the 600 tpy decrease was creditable, the 600 tpy increase and 600 tpy decrease essentially cancel each other out. However, these are not the only emissions changes within the 5-year contemporaneous time period, and the NSR regulations require that all such changes be totaled, not just certain ones. Therefore, the 49.5 tpy increase from Phase I must be added, because it occurred within the 5-year contemporaneous period. The 262 tpy decrease in particulate matter emissions in 1981, which had been used to net out of review the 49.5 tpy increase in 1985, cannot be used because it occurred outside of the five-year contemporaneous time period.

It would appear then that CPC has two options for resolving the permitting requirements for the Phase II project. The first option would be for CPC to determine if its emissions were reduced by at least 25 tpy due to other changes within the contemporaneous time period (in addition to the 600 tpy reductions associated with the Phase II Project) to net against the 49.5 tpy and enable the source to obtain a minor source permit. Of course, a second option would be for the source to go through NSR, (i.e., install LAER, obtain offsets greater than 1:1, etc.), and thereby "wipe the slate clean."

Please contact me at (919) 541-5586 or Gary McCutchen at (919) 541-5592 if you have additional questions regarding the matters discussed in this letter.

Sincerely,

Edward J. Lillis, Chief
Noncriteria Pollutant Programs Branch
Air Quality Management Division

cc: Richard Wagner, Region V
David Kee, Region V
Judy Katz, OECM
Sally Farrell, SSCD
Gary McCutchen, AQMD

Crumpler 1-39-4
AQMD:NPPB:NSRS:D.CRUMPLER:629-0871:RTP MD-15
Revised 01/11/89 (cb)
Notebook Entries: 4.40; 23.30

Guidance on several issues related to determining applicability of new major source regulations in the granting of construction permits to sources of air emissions

Memo provides guidance on several issues related to determining applicability of major source regulations in granting construction permits to modified sources.

1. A reviewing agency must base determination of whether a source is "major" on "major" source definitions in the Federal Register.
2. Whether the emissions increase related to a modification is significant is determined before any netting calculation is done. If it is, netting calculations are then performed to determine whether the "net emissions increase" associated with that modification is significant.
3. Contemporaneous emissions increases and decreases are discussed, as well as other factors affecting whether they are "creditable".
4. An example of a netting calculation is shown. Emissions increases or decreases used in issuing previous major source permit cannot be creditable to a subsequent increase.

Notebook Entries: 4.40; 23.30

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4.44

December 29, 1989

MEMORANDUM

SUBJECT: Use of Netting Credits

FROM: John Calcagni, Director
Air Quality Management Division (MD-15)

TO: Bruce P. Miller, Chief
Air Programs Branch, Region IV

This memorandum is in response to your October 27, 1989 memorandum which asked several questions concerning the Environmental Protection Agency's (EPA's) position on netting. Specifically, you asked the following questions:

1. Can "leftover" contemporaneous emissions reductions be used in future netting transactions?

2. If so, can these emissions credits be sold or otherwise be used by a separate facility with a different, major, standard industrial classification (SIC) number under any circumstances?

3. If a source is allowed to use the leftover emissions credits in the future, is the 5-year netting time frame opened for all pollutants, even though a modification may be major for only a limited number of pollutants?

The following response is based on our reading of the Federal regulations. However, States with federally approved prevention of significant deterioration (PSD) State implementation plans are free to follow a more stringent interpretation of their regulations.

Your first question asked whether a source could use "leftover" emissions reduction credits from a netting transaction in future netting transactions. We assume by "leftover" emissions reductions you mean some portion of an emissions decrease that does not appear to be fully utilized in allowing a source to net out of review. As explained below [and in the January 12, 1989 letter (see attached) from Ed Lillis to Michael Hayes], the procedure we recommend for considering emissions increases and decreases in a netting calculation does not result in "leftover" emissions credits, since emissions increases and decreases are considered in their entirety.

The pertinent PSD criteria for emissions increases and decreases to be creditable for netting transactions is CFR 40 Part 52.21(b)(3)(iii) or Part 51.166(b)(3)(iii), which states that the emissions increases and decreases are creditable:

b)..."if the reviewing authority has not relied on it (e.g., an emissions decrease) in issuing a permit for the source under regulations approved pursuant to this section, which permit is in effect when the increase in actual emissions from the particular change occurs." [NOTE: EPA's policy is to interpret the permit to be a PSD permit.]

There are situations, such as when a source nets out of review, when the permitting authority does not rely on creditable emissions increases or decreases "in issuing a PSD permit." For example, when a source nets out of review, no PSD permit is issued. As such, the reviewing authority has not relied on any creditable emissions increases or decreases in issuing a permit, so the emissions increases and decreases are still available for future applications.

For example, a major source proposes to replace a boiler that emits 30 tons per year (tpy) of sulfur dioxide (SO2) with a new unit that has a potential to emit 50 tpy SO2. Also, the source shut down a 40 tpy SO2 unit 3 years prior to the proposed modification. As such, the netting equation for the example is:

+50 tpy (proposed increase) minus 30 tpy (current shutdown) minus 40 tpy (previous shutdown) = -20 tpy SO2

Note that these shutdowns, as all other decreases, must be federally enforceable in order to be creditable. Consequently, the source nets out of review, and no PSD permit is issued.

We do not view the -20 tpy SO2 that results from the netting calculation as "leftover" credit. Rather, we view each of the contemporaneous and otherwise creditable emissions increases and decreases considered by the source in netting out of review as still being fully available, and must therefore be included in the next netting transaction at the source. To further illustrate, suppose the source in the example plans to add another new boiler in 3 years, which will increase SO2 emissions by 50 tpy without replacing any existing units. A new net emissions increase must be calculated. The 40 tpy reduction that was creditable in the previous netting transaction will have passed out of the contemporaneous window, so it is no longer available. The new net emissions increase is calculated as follows:

+50 tpy (proposed increase) plus 50 tpy (previous increase) minus 30 tpy (previous shutdown) = 70 tpy SO2

In this case, the source does not net out of review and must get a PSD permit.

Where a source is not able to net out of review, any emissions increase or decrease used in the netting equation to determine source applicability must also be used in its entirety in the subsequent air quality impact analysis. In this manner, a reviewing authority relies on the full emissions increase or

decrease in determining whether the proposed project would or would not cause, or contribute to, a violation of an increment or ambient standard. At this point, these increases and decreases are no longer creditable.

Your second question asked if "leftover" credits existed, could those credits be sold or otherwise used by a separate facility (with a different major SIC number) under any circumstances. As a hypothetical example, you asked if a new major source, with a different SIC number and under separate ownership, located on the property of another source, could it use the "leftover" netting credits under any circumstances. The answer to this situation is no, since netting is source-specific. Emissions reduction credits cannot be sold to, or used by, separate sources for PSD netting purposes, even if they are collocated at the same site.

The answer to your third question is no. It was addressed in my September 18, 1989 memorandum to William B. Hathaway, Director of the Air, Pesticides, and Toxics Division, EPA Region VI, a copy of which is attached. Please refer to the response to question 2 in that memorandum.

If you have any questions, please contact Gary McCutchen or Dennis Crumpler of my staff at FTS 629-5592 or FTS 629-0871, respectively.

2 Attachments

cc: G. Foote, OGC
Air Branch Chief, Regions I-III, V-X
New Source Review Contacts

Use of Netting Credits

Emissions decreases that are not fully utilized in allowing a source to net out of review do not result in "leftover" emissions credits that could be used in any future netting transactions. All contemporaneous and creditable emissions changes used to net out of review remain fully available and must be included in subsequent netting transactions at the source unless they occur before the contemporaneous time period of the subsequent modification under consideration or they are "relied upon" in issuing a major source permit. The memo provides an example of a netting calculus.

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 14, 2000

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Gregg Worley, Chief
Air, Radiation Technology Branch
Preconstruction/HAP Section
U.S. EPA – Region 4
61 Forsyth Street
Atlanta, Georgia 30303

RE: Florida Power and Light Company
Fort Myers Plant
PSD-FL-298
Facility ID No. 0710002-009-AC

Dear Mr. Worley:

Enclosed for your review and comment is an application for construction of a PSD source. The applicant, Florida Power and Light Company, proposes to construct two natural gas fired combustion turbines at their Fort Myers plant in Lee County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/922-6979. If you have any questions, please contact the project engineer, Jeffrey Koerner, at 850/414-7268.

Sincerely,

Patty Adams

for Al Linero, P.E.
Administrator
New Source Review Section

AAL/jka

Enclosures

7099 3400 0000 1453 2726

U.S. Postal Service
CERTIFIED MAIL RECEIPT
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Article Sent To:
Greg Worley

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Restricted Delivery Fee (Endorsement Required)		
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Nam Mr. Greg Worley
Air, Radiation Technical Branch
Stre US EPA - Region 4
61 Forsyth St.
City, Atlanta, GA 30303

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Mr. Greg Worley
Air, Radiation Technical Branch
US EPA - Region 4
61 Forsyth St.
Atlanta, GA 30303

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A. Received by *(Please Print Clearly)*
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X [signature]
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☐ Addressee

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Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

August 14, 2000

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS – Air Quality Division
Post Office Box 25287
Denver, Colorado 80225

RE: Florida Power and Light Company
Fort Myers Plant
PSD-FL-298
Facility ID No. 0710002-009-AC

Dear Mr. Bunyak:

Enclosed for your review and comment is an application for construction of a PSD source. The applicant, Florida Power and Light Company, proposes to construct two natural gas fired combustion turbines at their Fort Myers plant in Lee County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/922-6979. If you have any questions, please contact the project engineer, Jeffrey Koerner, at 850/414-7268.

Sincerely,

Patty Adams

for Al Linero, P.E.
Administrator
New Source Review Section

AAL/jka

Enclosures

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Article Sent To:

John Bunyak

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Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
P.O. Box 25287
Denver, CO 80225

PS Form 3800, July 1999 — See Reverse for Instructions

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1. Article Addressed to:

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
P.O. Box 25287
Denver, CO 80225

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C. Signature
X
☐ Agent
☐ Addressee
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If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2757

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

FPL

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

RECEIVED

AUG 10 2000

BUREAU OF AIR REGULATION

August 9, 2000

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

Re: FPL Fort Myers Peaking Project
Submittal of Air Construction (PSD) Application

Dear Al:

Enclosed for your use please find seven (7) copies of an Air Construction (PSD) permit application for the Fort Myers plant. As we've discussed previously, this project involves the construction of two GE 7FA combustion turbine peaking units to be operated in simple cycle mode, primarily on natural gas fuel.

Please note that this application applies emission reductions associated with the shutdown of existing units 1 and 2 at Fort Myers, to the peaking units' emissions. By doing this, the only pollutant that triggers PSD review is volatile organic compounds (VOC's).

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

Very truly yours,

Richard Piper
Licensing Manager
Florida Power & Light Company

cc:
FDEP South District Office
G. Kahanen
C. Carlson
SD
EPA
NPS

RECEIVED

AUG 10 2000

BUREAU OF AIR REGULATION

AIR PERMIT APPLICATION FOR THE FORT MYERS SIMPLE-CYCLE COMBUSTION TURBINE PROJECT

Prepared For:

Florida Power and Light Company
700 Universe Blvd.
Juno Beach, Florida 33408

Prepared By:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

July 2000
9937613Y/F1

DISTRIBUTION:
2 Copies - Client
2 Copies - Golder Associates Inc.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES
(continued)

LIST OF FIGURES

AIR PERMIT APPLICATION

Department of
Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Florida Power and Light Company**	
2. Site Name: **Fort Myers Plant**	
3. Facility Identification Number: **0710002**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **10650 State Road 80** City: **Fort Myers** County: **Lee** Zip Code: **33905**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Richard G. Piper, Repowering Licensing Manager**
2. Application Contact Mailing Address: Organization/Firm: **Florida Power and Light Company** Street Address: **700 Universe Blvd.** City: **Juno Beach** State: **FL** Zip Code: **33408**
3. Application Contact Telephone Numbers: Telephone: (**561**) **691 - 7058** Fax: (**561**) **691 - 7070**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	8-10-00
2. Permit Number:	0710002-009-AC
3. PSD Number (if applicable):	PSD-FL-294
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:______________________________

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:______________________________

Operation permit number to be revised:______________________________

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:______________________

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:______________________________

Reason for revision:____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1.	Name and Title of Owner/Authorized Representative or Responsible Official: **William Reichel, Plant General Manager**
2.	Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: **Florida Power and Light Company, Fort Myers Plant** Street Address: **P.O. Box 430** City: **Fort Myers** State: **FL** Zip Code: **33905**
3.	Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: **(941) 693 - 4200** Fax: **(941) 693 - 4333**
4.	Owner/Authorized Representative or Responsible Official Statement: *I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.* William Reichel — 8/8/00 Signature — Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1.	Professional Engineer Name: **Kennard F. Kosky** Registration Number: **14996**
2.	Professional Engineer Mailing Address: Organization/Firm: **Golder Associates Inc.** Street Address: **6241 NW 23rd Street, Suite 500** City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3.	Professional Engineer Telephone Numbers: Telephone: **(352) 336 - 5600** Fax: **(352) 336 - 6603**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [**X**], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Kennard F. Kosky | 7/28/00

Signature | Date

(seal)

KENNARD F. KOSKY
CERTIFICATE
STATE OF FLORIDA
REGISTERED ENGINEER

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
--	GE Frame 7FA Combustion Turbine	AC1A	
--	GE Frame 7FA Combustion Turbine	AC1A	
--	Natural Gas Heaters	AC1A	

Application Processing Fee

Check one: [X] Attached - Amount: $: 7,500 [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations: **Construction of 2 170-MW GE FRAME 7FA combustion turbines. See Attachment FPL-FMI.**	
2. Projected or Actual Date of Commencement of Construction:	**1 Apr 2001**
3. Projected Date of Completion of Construction:	**1 Aug 2002**

Application Comment

This application requests an air construction permit and PSD approval for two (2) advanced combustion turbines. Adding the two combustion turbines, coupled with the emission reductions from the Fort Myers Repowering Project will result in a decrease of all regulated pollutants except for CO and VOCs. The PSD threshold of 40 TPY of VOC is exceeded and PSD review of VOC applies. PSD review does not apply to other criteria pollutants. Refer to Part II for discussion. See Attachment FPL-FMI.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17	East (km): 422.3	North (km): 2952.9	
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 26 / 41 / 49		Longitude (DD/MM/SS): 81 / 46 / 55	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment (limit to 500 characters): Project consists of two 170-MW dual-fuel, General Electric Frame 7FA combustion turbines(CT) that will use dry low-nitrogen oxide combustion technology when firing natural gas and water injection when firing distillate fuel oil. Each CT will operate up to 8,760 hours per year.			

Facility Contact

1. Name and Title of Facility Contact: Mr. Bernie Tibble, Environmental Specialist			
2. Facility Contact Mailing Address: Organization/Firm: Florida Power and Light Company Street Address: P.O. Box 430 City: Fort Myers	State: FL	Zip Code: 33905	
3. Facility Contact Telephone Numbers: Telephone: (941) 693 - 4390		Fax: (941) 693 - 4333	

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] One or More Emissions Units Subject to NSPS?	
7. [ ] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): **CT is subject to NSPS Subpart GG.**	

List of Applicable Regulations

Not Applicable	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment
PM	**A**				**Particulate Matter-Total**
VOC	**A**				**Volatile Organic Compounds**
SO_2	**A**				**Sulfur Dioxide**
NO_X	**A**				**Nitrogen Oxides**
CO	**A**				**Carbon Monoxides**
PM_{10}	**A**				**Particulate Matter-PM_{10}**

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1.	Area Map Showing Facility Location: [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
2.	Facility Plot Plan: [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
3.	Process Flow Diagram(s): [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
4.	Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID: ______ [X] Not Applicable [ ] Waiver Requested
5.	Fugitive Emissions Identification: [ ] Attached, Document ID: ______ [X] Not Applicable [ ] Waiver Requested
6.	Supplemental Information for Construction Permit Application: [X] Attached, Document ID: FPL-FMI [ ] Not Applicable
7.	Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:________ [ ] Not Applicable

9. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID:________
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

10. Alternative Methods of Operation:
   [ ] Attached, Document ID:________ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading):
   [ ] Attached, Document ID:________ [ ] Not Applicable

12. Identification of Additional Applicable Requirements:
   [ ] Attached, Document ID:________ [ ] Not Applicable

13. Risk Management Plan Verification:
   [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:________) or previously submitted to DEP (Date and DEP Office:________________________)
   [ ] Plan to be submitted to CEPPO (Date required:________________________)
   [ ] Not Applicable

14. Compliance Report and Plan:
   [ ] Attached, Document ID:________ [ ] Not Applicable

15. Compliance Certification (Hard-copy Required):
   [ ] Attached, Document ID:________ [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
GE Frame 7FA Combustion Turbine

4. Emissions Unit Identification Number: [ ] No ID
ID: [X] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C		**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is a GE Frame 7FA combustion turbine operating in simple cycle mode. See Attachment FPL-FMI.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Dry Low NO_x combustion - Natural gas firing**	
2. Control Device or Method Code(s): **25**	

Emissions Unit Details

1. Package Unit: Manufacturer: **General Electric**	Model Number: **7FA**	
2. Generator Nameplate Rating:	**172** MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Water injection - distillate oil firing**	
2. Control Device or Method Code(s):	**28**

Emissions Unit Details

1. Package Unit: Manufacturer: **General Electric**		Model Number: **7FA**	
2. Generator Nameplate Rating:	**172**	MW	
3. Incinerator Information:			
Dwell Temperature:			°F
Dwell Time:			seconds
Incinerator Afterburner Temperature:			°F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Heat Input Rate:		**1,600**	mmBtu/hr
2.	Maximum Incineration Rate:	lb/hr		tons/day
3.	Maximum Process or Throughput Rate:			
4.	Maximum Production Rate:			
5.	Requested Maximum Operating Schedule:			
		hours/day		days/week
		weeks/year	**8,760**	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input at ISO conditions and natural gas firing (LHV); maximum for oil firing is 1,811 MMBtu/hr (ISO-LHV) and 180 MW; Higher power modes – gas is 1,680 MMBtu/hr and 182 MW.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment FPL-EU1-D for operational requirements	
See Attachment FPL-FMI for permitting requirements	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Att. FPL-FMI**	2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Exhausts through a single stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	

5. Discharge Type Code: **V**	6. Stack Height: **80** feet	7. Exit Diameter: **20.5** feet
8. Exit Temperature: **1,116** °F	9. Actual Volumetric Flow Rate: **2,389,462** acfm	10. Water Vapor: **8.4** %

11. Maximum Dry Standard Flow Rate: **800,000** dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **543.1** North (km): **2992.9**	
14. Emission Point Comment (limit to 200 characters): **Stack parameters for ISO operating condition firing natural gas above; for oil 1,098°F and 2,464,273 ACFM; HPM 1,130°F and 2,426,858.**	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Distillate (No. 2) Fuel Oil**		
2. Source Classification Code (SCC): **20100101**	3. SCC Units: **1,000 gallons used**	
4. Maximum Hourly Rate: **14**	5. Maximum Annual Rate: **7,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **130**
10. Segment Comment (limit to 200 characters): **Million Btu per SCC Unit = 129.9 (rounded to 130). Based on 7.1 lb/gal; LHV of 18,300 Btu/lb, ISO conditions, 500 hrs/yr operation.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural Gas**		
2. Source Classification Code (SCC): **20100201**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **1.68**	5. Maximum Annual Rate: **14,752**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **950**
10. Segment Comment (limit to 200 characters): **Based on 950 Btu/cf (LHV); ISO conditions and 8,760 hrs/yr operation.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
SO_2			EL
NO_X	026	028	EL
CO			EL
VOC			EL
PM_{10}			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **17** lb/hour **4.25** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 9; if > 400 hours**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing - all loads; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **43.8** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity; EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing - all loads; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **2.5** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity, EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing -100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **103.1** lb/hour **44.9** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05% Sulfur Oil**	4. Equivalent Allowable Emissions: **103.1** lb/hour **24.7** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Sampling**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing max @ 35°F; 100% load; TPY @ 59°F 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **103.1** lb/hour **44.9** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **See Comment**	4. Equivalent Allowable Emissions: **5.1** lb/hour **21.5** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Sampling**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested allowable emissions and units: Pipeline Natural Gas. Gas firing, 1 gram/100 cf - 35°F, 100% load; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: SO_2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 103.1 lb/hour 44.9 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: GE, 2000; Golder	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): See Attachment FPL-FMI; Section 2.0; Appendix A.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: See Comment	4. Equivalent Allowable Emissions: 5.3 lb/hour 1.3 tons/year
5. Method of Compliance (limit to 60 characters): Fuel Sampling	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Requested allowable emissions and units: Pipeline Natural Gas. HPM firing, 1 gram/100 cf - 35°F, 100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **333.8** lb/hour **370.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions
Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppmvd**	4. Equivalent Allowable Emissions: **333.8** lb/hour **79.8** tons/year
5. Method of Compliance (limit to 60 characters): **CEM - 30 Day Rolling Average**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions is at 15% O_2-100% load. Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **333.8** lb/hour **370.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10.5 ppmvd**	4. Equivalent Allowable Emissions: **71.6** lb/hour **299.7** tons/year
5. Method of Compliance (limit to 60 characters): **CEM - 30 Day Rolling Average**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions and Units is at 15% O_2-100% load. Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**
2. Total Percent Efficiency of Control:
3. Potential Emissions: **333.8** lb/hour **370.6** tons/year
4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year
6. Emission Factor: Reference: **GE, 2000; Golder**
7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters):

   See Attachment FPL-FMI; Section 2.0; Appendix A.

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

   Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **15 ppmvd**
4. Equivalent Allowable Emissions: **105.1** lb/hour **25.3** tons/year
5. Method of Compliance (limit to 60 characters):

   CEM - 30 Day Rolling Average

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

   Requested Allowable Emissions and Units is at 15% O_2-100% load. HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20 ppmvd - Baseload**	4. Equivalent Allowable Emissions: **68.1** lb/hour **16.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **12 ppmvd**	4. Equivalent Allowable Emissions: **30.3** lb/hour **126.0** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **15 ppmvd**	4. Equivalent Allowable Emissions: **50.5** lb/hour **12.0** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**

2. Total Percent Efficiency of Control:

3. Potential Emissions: **7.6** lb/hour **13.1** tons/year

4. Synthetically Limited? [X]

5. Range of Estimated Fugitive Emissions:
[ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year

6. Emission Factor:
Reference: **GE, 2000; Golder**

7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

See Attachment FPL-FMI; Section 2.0; Appendix A. VOC emissions exclusive of background VOC concentrations.

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**

2. Future Effective Date of Allowable Emissions:

3. Requested Allowable Emissions and Units: **3.5 ppmvw**

4. Equivalent Allowable Emissions: **7.6** lb/hour **1.8** tons/year

5. Method of Compliance (limit to 60 characters):

EPA Method 25A; high load

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**
2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.6** lb/hour **13.1** tons/year
4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year
6. Emission Factor:
   Reference: **GE, 2000; Golder**
7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters):
   See Attachment FPL-FMI; Section 2.0; Appendix A.
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):
   Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions

Allowable Emissions Allowable Emissions **2** of **3**

1. Basis for Allowable Emissions Code: **OTHER**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.5 ppmvd**
4. Equivalent Allowable Emissions: **2.9** lb/hour **12.0** tons/year
5. Method of Compliance (limit to 60 characters):
   EPA Method 25A; high load
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
   Additional requested allowable emissions and units: Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.6** lb/hour **13.1** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.5 ppmvd**	4. Equivalent Allowable Emissions: **2.9** lb/hour **0.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Additional requested allowable emissions and units: HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 59°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **17** lb/hour **4.25** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 9 if >400 hours**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing - all loads; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **2.5** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity, EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing; 100% loads; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **43.8** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity, EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing; all loads; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [ ] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [ ] Not Applicable

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **None**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-201.700(1), Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_X**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: **Not yet determined** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **01 Jan 2003**	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Parameter Code: WTF. Required by 40 CFR Part 60; subpart GG; 60.334.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Maximum for gas and oil firing.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_X**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: **Not yet determined** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **01 Jan 2003**	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **NO_X CEM proposed to meet requirements of 40 CFR Part 75.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: FPL-FMI [ ] Not Applicable	
9. Other Information Required by Rule or Statute [X] Attached, Document ID: FPL-FMI [ ] Not Applicable	
10. Supplemental Requirements Comment:	

ATTACHMENT FPL-EU1-D

APPLICABLE REQUIREMENTS LISTING

ATTACHMENT FPL-EU1-D

Applicable Requirements Listing

EMISSION UNIT ID: EU1

FDEP Rules:

Air Pollution Control-General Provisions:

62-204.800(7)(b)37. (State Only)	NSPS Subpart GG
62-204.800(7)(c) (State Only)	NSPS authority
62-204.800(7)(d)(State Only)	NSPS General Provisions
62-204.800(12) (State Only)	Acid Rain Program
62-204.800(13) (State Only)	Allowances
62-204.800(14) (State Only)	Acid Rain Program Monitoring
62-204.800(16) (State Only)	Excess Emissions (Potentially applicable over term of permit)

Stationary Sources-General:

62-210.650	Circumvention; EUs with control device
62-210.700(1)	Excess Emissions;
62-210.700(4)	Excess Emissions; poor maintenance
62-210.700(6)	Excess Emissions; notification

Acid Rain:

62-214.300	All Acid Rain Units (Applicability)
62-214.320(1)(a),(2)	All Acid Rain Units (Application Shield)
62-214.330(1)(a)1.	Compliance Options (if 214.430)
62-214.340	Exemptions (new units, retired units)
62-214.350(2);(3);(6)	All Acid Rain Units (Certification)
62-214.370	All Acid Rain Units (Revisions; correction; potentially applicable if a need arises)
62-214.430	All Acid Rain Units (Compliance Options-if required)

Stationary Sources-Emission Standards:

62-296.320(4)(b)(State Only)	CTs/Diesel Units

Stationary Sources-Emission Monitoring (where stack test is required):

62-297.310(1)	All Units (Test Runs-Mass Emission)
62-297.310(2)(b)	All Units (Operating Rate; other than CTs;no CT)
62-297.310(3)	All Units (Calculation of Emission)
62-297.310(4)(a)	All Units (Applicable Test Procedures;Sampling time)
62-297.310(4)(b)	All Units (Sample Volume)
62-297.310(4)(c)	All Units (Required Flow Rate Range-PM/H2SO4/F)
62-297.310(4)(d)	All Units (Calibration)
62-297.310(4)(e)	All Units (EPA Method 5-only)
62-297.310(5)	All Units (Determination of Process Variables)

62-297.310(6)(a)	All Units (Permanent Test Facilities-general)
62-297.310(6)(c)	All Units (Sampling Ports)
62-297.310(6)(d)	All Units (Work Platforms)
62-297.310(6)(e)	All Units (Access)
62-297.310(6)(f)	All Units (Electrical Power)
62-297.310(6)(g)	All Units (Equipment Support)
62-297.310(7)(a)1.	Applies mainly to CTs/Diesels
62-297.310(7)(a)2.	FFSG excess emissions
62-297.310(7)(a)3.	Permit Renewal Test Required
62-297.310(7)(a)4.a	Annual Test
62-297.310(7)(a)5.	PM exemption if <400 hrs/yr
62-297.310(7)(a)6.	PM FFSG semi annual test required if >200 hrs/yr
62-297.310(7)(a)7.	PM quarterly monitoring if >100 hrs/yr
62-297.310(7)(a)9.	FDEP Notification - 15 days
62-297.310(7)(c)	Waiver of Compliance Tests (Fuel Sampling)
62-297.310(8)	Test Reports

Federal Rules:

NSPS Subpart GG:

40 CFR 60.332(a)(1)	NO_x for Electric Utility CTs
40 CFR 60.332(a)(3)	NO_x for Electric Utility CTs
40 CFR 60.333	SO_2 limits
40 CFR 60.334	Monitoring of Operations (Custom Monitoring for Gas)
40 CFR 60.335	Test Methods

NSPS General Requirements:

40 CFR 60.7(a)(1)	Notification of Construction
40 CFR 60.7(a)(2)	Notification of Initial Start-Up
40 CFR 60.7(a)(3)	Notification of Actual Start-Up
40 CFR 60.7(a)(4)	Notification and Recordkeeping (Physical/Operational Cycle)
40 CFR 60.7(a)(5)	Notification of CEM Demonstration
40 CFR 60.7(b)	Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(c)	Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(d)	Notification and Recordkeeping (startup/shutdown/malfunction)
40 CFR 60.7(f)	Notification and Recordkeeping (maintain records-2 yrs)
40 CFR 60.8(a)	Performance Test Requirements
40 CFR 60.8(b)	Performance Test Notification
40 CFR 60.8(c)	Performance Tests (representative conditions)
40 CFR 60.8(e)	Provide Stack Sampling Facilities
40 CFR 60.8(f)	Test Runs
40 CFR 60.11(a)	Compliance (ref. S. 60.8 or Subpart; other than opacity)
40 CFR 60.11(b)	Compliance (opacity determined EPA Method 9)
40 CFR 60.11(c)	Compliance (opacity; excludes startup/shutdown/malfunction)
40 CFR 60.11(d)	Compliance (maintain air pollution control equip.)
40 CFR 60.11(e)(2)	Compliance (opacity; ref. S. 60.8)
40 CFR 60.12	Circumvention

40 CFR 60.13(a)	Monitoring (Appendix B; Appendix F)
40 CFR 60.13(c)	Monitoring (Opacity COMS)
40 CFR 60.13(d)(1)	Monitoring (CEMS; span, drift, etc.)
40 CFR 60.13(d)(2)	Monitoring (COMS; span, system check)
40 CFR 60.13(e)	Monitoring (frequency of operation)
40 CFR 60.13(f)	Monitoring (frequency of operation)
40 CFR 60.13(h)	Monitoring (COMS; data requirements)

Acid Rain-Permits:

40 CFR 72.9(a)	Permit Requirements
40 CFR 72.9(b)	Monitoring Requirements
40 CFR 72.9(c)(1)	SO_2 Allowances-hold allowances
40 CFR 72.9(c)(2)	SO_2 Allowances-violation
40 CFR 72.9(c)(3)(iii)	SO_2 Allowances-Phase II Units (listed)
40 CFR 72.9(c)(4)	SO_2 Allowances-allowances held in ATS
40 CFR 72.9(c)(5)	SO_2 Allowances-no deduction for 72.9(c)(1)(i)
40 CFR 72.9(d)	NO_x Requirements
40 CFR 72.9(e)	Excess Emission Requirements
40 CFR 72.9(f)	Recordkeeping and Reporting
40 CFR 72.9(g)	Liability
40 CFR 72.20(a)	Designated Representative; required
40 CFR 72.20(b)	Designated Representative; legally binding
40 CFR 72.20(c)	Designated Representative; certification requirements
40 CFR 72.21	Submissions
40 CFR 72.22	Alternate Designated Representative
40 CFR 72.23	Changing representatives; owners
40 CFR 72.24	Certificate of representation
40 CFR 72.30(a)	Requirements to Apply (operate)
40 CFR 72.30(b)(2)	Requirements to Apply (Phase II-Complete)
40 CFR 72.30(c)	Requirements to Apply (reapply before expiration)
40 CFR 72.30(d)	Requirements to Apply (submittal requirements)
40 CFR 72.31	Information Requirements; Acid Rain Applications
40 CFR 72.32	Permit Application Shield
40 CFR 72.33(b)	Dispatch System ID;unit/system ID
40 CFR 72.33(c)	Dispatch System ID;ID requirements
40 CFR 72.33(d)	Dispatch System ID;ID change
40 CFR 72.40(a)	General; compliance plan
40 CFR 72.40(b)	General; multi-unit compliance options
40 CFR 72.40(c)	General; conditional approval
40 CFR 72.40(d)	General; termination of compliance options
40 CFR 72.51	Permit Shield
40 CFR 72.90	Annual Compliance Certification

Allowances:

40 CFR 73.33(a),(c)	Authorized account representative
40 CFR 73.35(c)(1)	Compliance: ID of allowances by serial number

Monitoring Part 75:

40 CFR 75.4	Compliance Dates;
40 CFR 75.5	Prohibitions
40 CFR 75.10(a)(1)	Primary Measurement; SO_2;
40 CFR 75.10(a)(2)	Primary Measurement; NO_x;
40 CFR 75.10(a)(3)(iii)	Primary Measurement; CO_2; O_2 monitor
40 CFR 75.10(b)	Primary Measurement; Performance Requirements
40 CFR 75.10(c)	Primary Measurement; Heat Input; Appendix F
40 CFR 75.10(e)	Primary Measurement; Optional Backup Monitor
40 CFR 75.10(f)	Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	Primary Measurement; Minimum Recording
40 CFR 75.11(d)	SO_2 Monitoring; Gas- and Oil-fired units
40 CFR 75.11(e)	SO_2 Monitoring; Gaseous firing
40 CFR 75.12(a)	NO_x Monitoring; Coal; Non-peaking oil/gas units
40 CFR 75.12(b)	NO_x Monitoring; Determination of NO_x emission rate; Appendix F
40 CFR 75.13(b)	CO_2 Monitoring; Appendix G
40 CFR 75.13(c)	CO_2 Monitoring; Appendix F
40 CFR 75.14(c)	Opacity Monitoring; Gas units; exemption
40 CFR 75.20(a)	Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	Recertification Procedures (if recertification necessary)
40 CFR 75.20(c)	Certification Procedures (if recertification necessary)
40 CFR 75.20(d)	Recertification Backup/portable monitor
40 CFR 75.20(f)	Alternate Monitoring system
40 CFR 75.21(a)	QA/QC; CEMS; Appendix B (Suspended 7/17/95-12/31/96)
40 CFR 75.21(c)	QA/QC; Calibration Gases
40 CFR 75.21(d)	QA/QC; Notification of RATA
40 CFR 75.21(e)	QA/QC; Audits
40 CFR 75.21(f)	QA/QC; CEMS (Effective 7/17/96-12/31/96)
40 CFR 75.22	Reference Methods
40 CFR 75.24	Out-of-Control Periods; CEMS
40 CFR 75.30(a)(3)	General Missing Data Procedures; NO_x
40 CFR 75.30(a)(4)	General Missing Data Procedures; SO_2
40 CFR 75.30(b)	General Missing Data Procedures; certified backup monitor
40 CFR 75.30(c)	General Missing Data Procedures; certified backup monitor
40 CFR 75.30(d)	General Missing Data Procedures; SO_2 (optional before 1/1/97)
40 CFR 75.30(e)	General Missing Data Procedures; bypass/multiple stacks
40 CFR 75.31	Initial Missing Data Procedures (new/re-certified CMS)
40 CFR 75.32	Monitoring Data Availability for Missing Data
40 CFR 75.33	Standard Missing Data Procedures
40 CFR 75.36	Missing Data for Heat Input
40 CFR 75.40	Alternate Monitoring Systems-General
40 CFR 75.41	Alternate Monitoring Systems-Precision Criteria
40 CFR 75.42	Alternate Monitoring Systems-Reliability Criteria
40 CFR 75.43	Alternate Monitoring Systems-Accessability Criteria
40 CFR 75.44	Alternate Monitoring Systems-Timeliness Criteria
40 CFR 75.45	Alternate Monitoring Systems-Daily QA
40 CFR 75.46	Alternate Monitoring Systems-Missing data
40 CFR 75.47	Alternate Monitoring Systems-Criteria for Class

40 CFR 75.48	Alternate Monitoring Systems-Petition
40 CFR 75.53	Monitoring Plan; revisions
40 CFR 75.54(a)	Recordkeeping-general
40 CFR 75.54(b)	Recordkeeping-operating parameter
40 CFR 75.54(c)	Recordkeeping-SO_2
40 CFR 75.54(d)	Recordkeeping- NO_x
40 CFR 75.54(e)	Recordkeeping-CO_2
40 CFR 75.54(f)	Recordkeeping-Opacity
40 CFR 75.55(c)	General Recordkeeping (Specific Situations)
40 CFR 75.55(e)	General Recordkeeping (Specific Situations)
40 CFR 75.56	Certification; QA/QC Provisions
40 CFR 75.60	Reporting Requirements-General
40 CFR 75.61	Reporting Requirements-Notification cert/recertification
40 CFR 75.62	Reporting Requirements-Monitoring Plan
40 CFR 75.63	Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	Reporting Requirements-Quarterly reports; submission
40 CFR 75.64(b)	Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	Rep. Req.; Quarterly reports; Compliance Certification
40 CFR 75.64(d)	Rep. Req.; Quarterly reports; Electronic format
40 CFR 75.66	Petitions to the Administrator (if required)
Appendix A-1	Installation and Measurement Locations
Appendix A-2.	Equipment Specifications
Appendix A-3.	Performance Specifications
Appendix A-4.	Data Handling and Acquisition Systems
Appendix A-5.	Calibration Gases
Appendix A-6.	Certification Tests and Procedures
Appendix A-7.	Calculations
Appendix B	QA/QC Procedures
Appendix C-1.	Missing Data; SO_2/ NO_x for controlled sources
Appendix C-2.	Missing Data; Load-Based Procedure; NO_x & flow
Appendix D	Optional SO_2; Oil-/gas-fired units
Appendix F	Conversion Procedures
Appendix H	Traceability Protocol

Acid Rain Program-Excess Emissions (these are future requirements):

40 CFR 77.3	Offset Plans (future)
40 CFR 77.5(b)	Deductions of Allowances (future)
40 CFR 77.6	Excess Emissions Penalties (SO_2 and NO_x;future)

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
GE Frame 7FA Combustion Turbine

4. Emissions Unit Identification Number: [ ] No ID
ID: [X] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C		**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is a GE Frame 7FA combustion turbine operating in simple cycle mode. See Attachment FPL-FMI.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Dry Low NO_X combustion - Natural gas firing**
2. Control Device or Method Code(s): **25**

Emissions Unit Details

1. Package Unit: Manufacturer: **General Electric**	Model Number: **7FA**
2. Generator Nameplate Rating: **172** MW	
3. Incinerator Information: Dwell Temperature: °F Dwell Time: seconds Incinerator Afterburner Temperature: °F	

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Water injection - distillate oil firing**	
2. Control Device or Method Code(s): **28**	

Emissions Unit Details

1. Package Unit: Manufacturer: **General Electric**	Model Number: **7FA**	
2. Generator Nameplate Rating:	**172** MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:			1,600	mmBtu/hr
2. Maximum Incineration Rate:		lb/hr		tons/day
3. Maximum Process or Throughput Rate:				
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
		hours/day		days/week
		weeks/year	8,760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): Maximum heat input at ISO conditions and natural gas firing (LHV); maximum for oil firing is 1,811 MMBtu/hr (ISO-LHV) and 180 MW; Higher power modes – gas is 1,680 MMBtu/hr and 182 MW.				

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment FPL-EU1-D for operational requirements	
See Attachment FPL-FMI for permitting requirements	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Att. FPL-FMI**	2. Emission Point Type Code: **1**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Exhausts through a single stack.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code: **V**	6. Stack Height: **80** feet	7. Exit Diameter: **20.5** feet
8. Exit Temperature: **1,116** °F	9. Actual Volumetric Flow Rate: **2,389,462** acfm	10. Water Vapor: **8.4** %

11. Maximum Dry Standard Flow Rate: **800,000** dscfm	12. Nonstack Emission Point Height: feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **543.1** North (km): **2992.9**

14. Emission Point Comment (limit to 200 characters):

Stack parameters for ISO operating condition firing natural gas above; for oil 1,098°F and 2,464,273 ACFM; HPM 1,130°F and 2,426,858.

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Distillate (No. 2) Fuel Oil**		
2. Source Classification Code (SCC): **20100101**	3. SCC Units: **1,000 gallons used**	
4. Maximum Hourly Rate: **14**	5. Maximum Annual Rate: **7,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **130**
10. Segment Comment (limit to 200 characters): **Million Btu per SCC Unit = 129.9 (rounded to 130). Based on 7.1 lb/gal; LHV of 18,300 Btu/lb, ISO conditions, 500 hrs/yr operation.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural Gas**		
2. Source Classification Code (SCC): **20100201**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **1.68**	5. Maximum Annual Rate: **14,752**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **950**
10. Segment Comment (limit to 200 characters): **Based on 950 Btu/cf (LHV); ISO conditions and 8,760 hrs/yr operation.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			EL
SO_2			EL
NO_X	026	028	EL
CO			EL
VOC			EL
PM_{10}			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **17** lb/hour **4.25** tons/year
5. Method of Compliance (limit to 60 characters): **Annual stack test; EPA Method 9; if > 400 hours**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing - all loads; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **43.8** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity; EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing - all loads; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **2.5** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity; EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing - 100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **103.1** lb/hour **44.9** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05% Sulfur Oil**	4. Equivalent Allowable Emissions: **103.1** lb/hour **24.7** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Sampling**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing - 35°F; 100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **103.1** lb/hour **44.9** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **See Comment**	4. Equivalent Allowable Emissions: **5.1** lb/hour **21.5** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Sampling**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested allowable emissions and units: Pipeline Natural Gas. Gas firing, 1 gram/100 cf - 35°F, 100% load; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **103.1** lb/hour **44.9** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Emission Factor: 1 grain S per 100 CF gas; 0.05% S oil; lb/hr based on oil firing at 100% load and 35°F. Tons/yr based on 7,760 hrs/yr gas firing; 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions

Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **See Comment**	4. Equivalent Allowable Emissions: **5.3** lb/hour **1.3** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Sampling**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested allowable emissions and units: Pipeline Natural Gas. HPM firing, 1 gram/100 cf - 35°F, 100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **333.8** lb/hour **370.6** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppmvd**	4. Equivalent Allowable Emissions: **333.8** lb/hour **79.8** tons/year
5. Method of Compliance (limit to 60 characters): **CEM - 30 Day Rolling Average**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions is at 15% O_2-100% load. Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **333.8** lb/hour **370.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10.5 ppmvd**	4. Equivalent Allowable Emissions: **71.6** lb/hour **299.7** tons/year
5. Method of Compliance (limit to 60 characters): **CEM - 30 Day Rolling Average**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions and Units is at 15% O_2-100% load. Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: NO_X	2. Total Percent Efficiency of Control:
3. Potential Emissions: 333.8 lb/hour 370.6 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions

Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10.5 ppmvd**	4. Equivalent Allowable Emissions: **105.1** lb/hour **25.3** tons/year
5. Method of Compliance (limit to 60 characters): **CEM - 30 Day Rolling Average**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions and Units is at 15% O_2-100% load. HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20 ppmvd - Baseload**	4. Equivalent Allowable Emissions: **68.1** lb/hour **16.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 32°F. Tons/yr based on 7,760 hrs/yr gas firing and 5000 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **12 ppmvd**	4. Equivalent Allowable Emissions: **30.3** lb/hour **126.0** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **68.1** lb/hour **139.8** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and HPM firing; ISO conditions**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **15 ppmvd**	4. Equivalent Allowable Emissions: **50.5** lb/hour **12.0** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.6** lb/hour **13.1** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A. VOC emissions exclusive of background VOC concentrations.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions.**	

Allowable Emissions Allowable Emissions **1** of **3**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.5 ppmvw**	4. Equivalent Allowable Emissions: **7.6** lb/hour **1.8** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Oil firing; max @ 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.6** lb/hour **13.1** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions

Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.5 ppmvd**	4. Equivalent Allowable Emissions: **2.9** lb/hour **12.0** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Additional requested allowable emissions and units: Gas firing; 35°F; 100% load; TPY @ 59°F, 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **7.6** lb/hour **13.1** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing; 100% load; 35°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil and 500 hrs/yr HPM firing; ISO conditions**	

Allowable Emissions

Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.5 ppmvd**	4. Equivalent Allowable Emissions: **2.9** lb/hour **0.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 25A; high load**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Additional requested allowable emissions and units: HPM firing; 35°F; 100% load; TPY @ 59°F, 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**

2. Total Percent Efficiency of Control:

3. Potential Emissions: **17** lb/hour **45.6** tons/year

4. Synthetically Limited? [X]

5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year

6. Emission Factor:
   Reference: **GE, 2000; Golder**

7. Emissions Method Code: **2**

8. Calculation of Emissions (limit to 600 characters):

   See Attachment FPL-FMI; Section 2.0; Appendix A.

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

   Lb/hr based on oil firing; 100% load; 59°F. Tons/yr based on 7,760 hrs/yr gas firing and 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**

2. Future Effective Date of Allowable Emissions:

3. Requested Allowable Emissions and Units: **10% opacity**

4. Equivalent Allowable Emissions: **17** lb/hour **4.25** tons/year

5. Method of Compliance (limit to 60 characters):

   Annual stack test; EPA Method 9 if >400 hours

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

   Oil firing - all loads; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **43.8** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity, EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Gas firing; all loads; 8,760 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **45.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GE, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on oil firing, all loads. Tons/yr based on 7,760 hrs/yr gas firing baseload, 500 hrs/yr oil firing and 500 hours HPM; ISO conditions.**	

Allowable Emissions Allowable Emissions **3** of **3**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **10% opacity**	4. Equivalent Allowable Emissions: **10** lb/hour **2.5** tons/year
5. Method of Compliance (limit to 60 characters): **VE Test < 10% opacity**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **HPM firing; 100% load; 500 hrs/yr. See Attachment FPL-FMI; Section 2.0; Appendix A.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Maximum for gas and oil firing.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_X**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: **Not yet determined** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **01 Jan 2003**	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **NO_X CEM proposed to meet requirements of 40 CFR Part 75.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **None**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-201.700(1), Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_X**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: **Not yet determined** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **01 Jan 2003**	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Parameter Code: WTF. Required by 40 CFR Part 60; subpart GG; 60.334.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID: FPL-FMI [ ] Not Applicable	
9. Other Information Required by Rule or Statute [X] Attached, Document ID: FPL-FMI [ ] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Natural Gas Heaters

4. Emissions Unit Identification Number: [ ] No ID
ID: [X] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is Natural Gas Heaters for the GE Frame 7FA combustion turbine operating in simple cycle mode. See Attachment FPL-FMI.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Dry Low NO_X combustion - Natural gas firing**
2. Control Device or Method Code(s): **25**

Emissions Unit Details

1. Package Unit: Manufacturer: **Gas Tech or Equivalent**	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		23.71	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year	8,760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): Maximum heat input per unit when natural gas firing (HHV).			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

See Attachment FPL-FMI for permitting requirements	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Att. FPL-FMI**	2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Exhausts through a single stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	

5. Discharge Type Code: **V**	6. Stack Height: **30** feet	7. Exit Diameter: **1.5** feet
8. Exit Temperature: **713** °F	9. Actual Volumetric Flow Rate: **11,736** acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **543.1** North (km): **2992.9**	
14. Emission Point Comment (limit to 200 characters): **Each Heater will have one stack.**	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural Gas < 100 MMBtu/hr**		
2. Source Classification Code (SCC): **10100602**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.023**	5. Maximum Annual Rate: **406.7**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1020**
10. Segment Comment (limit to 200 characters): **Maximum hourly based on 1020 Btu/cf (HHV) for each heater; maximum annual based on 8,760 hrs/yr operation for 2 heaters.**		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NO_X	026		EL
CO			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2.36** lb/hour **20.7** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GasTech, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on one heater. Tons/yr based on 8,760 hrs/yr for 2 heaters.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/MMBtu**	4. Equivalent Allowable Emissions: **2.36** b/hour **20.7** tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **See Attachment FPL-FMI; Section 2.0.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **1.79** lb/hour **15.5** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: Reference: **GasTech, 2000; Golder**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **See Attachment FPL-FMI; Section 2.0; Appendix A.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Lb/hr based on one heater. Tons/yr based on 8,760 and 2 heaters.**	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.075 lb/MMBtu**	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **See Attachment FPL-FMI; Section 2.0.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual VE Test EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Maximum for gas firing. Rule 62-296.320 allows 20% opacity**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ______ of______

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: **VE99**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **6** min/hour	
4. Method of Compliance: **None**	
5. Visible Emissions Comment (limit to 200 characters): **FDEP Rule 62-201.700(1), Allowed for 2 hours (120 minutes) per 24 hours for start up, shutdown and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ______ of ______

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1.	Process Flow Diagram [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
2.	Fuel Analysis or Specification [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
3.	Detailed Description of Control Equipment [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
4.	Description of Stack Sampling Facilities [X] Attached, Document ID: FPL-FMI [ ] Not Applicable [ ] Waiver Requested
5.	Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6.	Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7.	Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8.	Supplemental Information for Construction Permit Application [X] Attached, Document ID: FPL-FMI [ ] Not Applicable
9.	Other Information Required by Rule or Statute [X] Attached, Document ID: FPL-FMI [ ] Not Applicable
10.	Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [ ] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [ ] Not Applicable

PART II

ATTACHMENT FPL-FM1

ANALYSIS REPORT

1.0 INTRODUCTION

Florida Power & Light Company (FPL) proposes to license, install, and operate two combustion turbines with a nominal capacity of 340 megawatts (MW) at the existing Fort Myers Plant located in Lee County, Florida (Figure 1-1). The Project consists of two 170-MW dual-fuel, General Electric Frame 7FA combustion turbines (CTs) that will use dry low-nitrogen oxide (NO_x) [dry-low NO_x (DLN)] combustion technology when operating on natural gas and water injection (for NO_x control) when operating on distillate fuel oil. The combustion turbines are being permitted to operate at capacity factors up to 100 percent. The primary fuel for the CTs will be natural gas with distillate fuel oil used as backup fuel. The fuel oil will contain a maximum sulfur content of 0.05 percent.

The Fort Myers Plant is located on 460 acres approximately 2.5 miles east of Tice, Florida, and north of State Road 80. Currently, the FPL Fort Myers Plant consists of two fossil-fuel-fired steam-generating units (Units 1 and 2) with a combined generating capacity of 593 megawatts (MW) and 12 simple-cycle gas turbines (GT 1-12) with a combined generating capacity of 708 MW. In addition, FPL is in the process of replacing the existing two fossil-fuel-fired steam generators with 6 "F" class CTs and heat recovery steam generators (HRSGs) operating as a combined-cycle plant, pursuant to construction permit No. 070002-004AC.

FPL has contracted Golder Associates Inc. (Golder) to:

- Prepare this application;
- Determine the applicability of state and federal new source review (NSR) regulations, including prevention of significant deterioration (PSD) and nonattainment review requirements; and
- Evaluate the Project's compliance with any applicable requirements.

Air quality impact analyses are also provided using an air dispersion model approved by the Florida Department of Environmental Protection (FDEP).

The proposed Project will be a new air pollution source that will result in increases in air emissions in Lee County. The U.S. Environmental Protection Agency (EPA) has implemented regulations requiring a PSD review. PSD regulations are promulgated under Volume 40 Code of Federal Regulations (CFR) Part 52.21 and implemented through delegation to the Florida Department of Environmental Protection (DEP). Florida's PSD regulations are codified in Rules 62-212.400, F.A.C. These regulations incorporate the EPA PSD regulations.

Lee County is designated as either an attainment area or an unclassifiable area for all criteria pollutants [i.e., attainment for ozone (O_3), particulate matter with aerodynamic diameter of 10 micrometers or less (PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), and nitrogen dioxide (NO_2); unclassifiable for lead] and is classified as a PSD Class II area for PM_{10}, SO_2, and NO_2.

The potential and actual emissions from the existing Units 1 and 2, the 6 CTs being constructed and, potential emissions from the new emission units to be installed as part of the Project, and the differences (net increases/decreases) are presented in Table 1-1. PSD review is not required for any regulated pollutant having a net emission increase less than the PSD significant emission rate, therefore, PSD review of the Fort Myers simple cycle CT project is applicable only for volatile organic compounds (VOCs). For informational purposes, this application presents the results of ambient air quality impact analyses that would be required if PSD review were applicable for other additional criteria pollutants. Moreover, the emission limits proposed for the CTs by FPL reflect use of best available control technology (BACT) and are at least as stringent as those established in recent PSD permits issued by FDEP

The air permit application is divided into seven major sections.

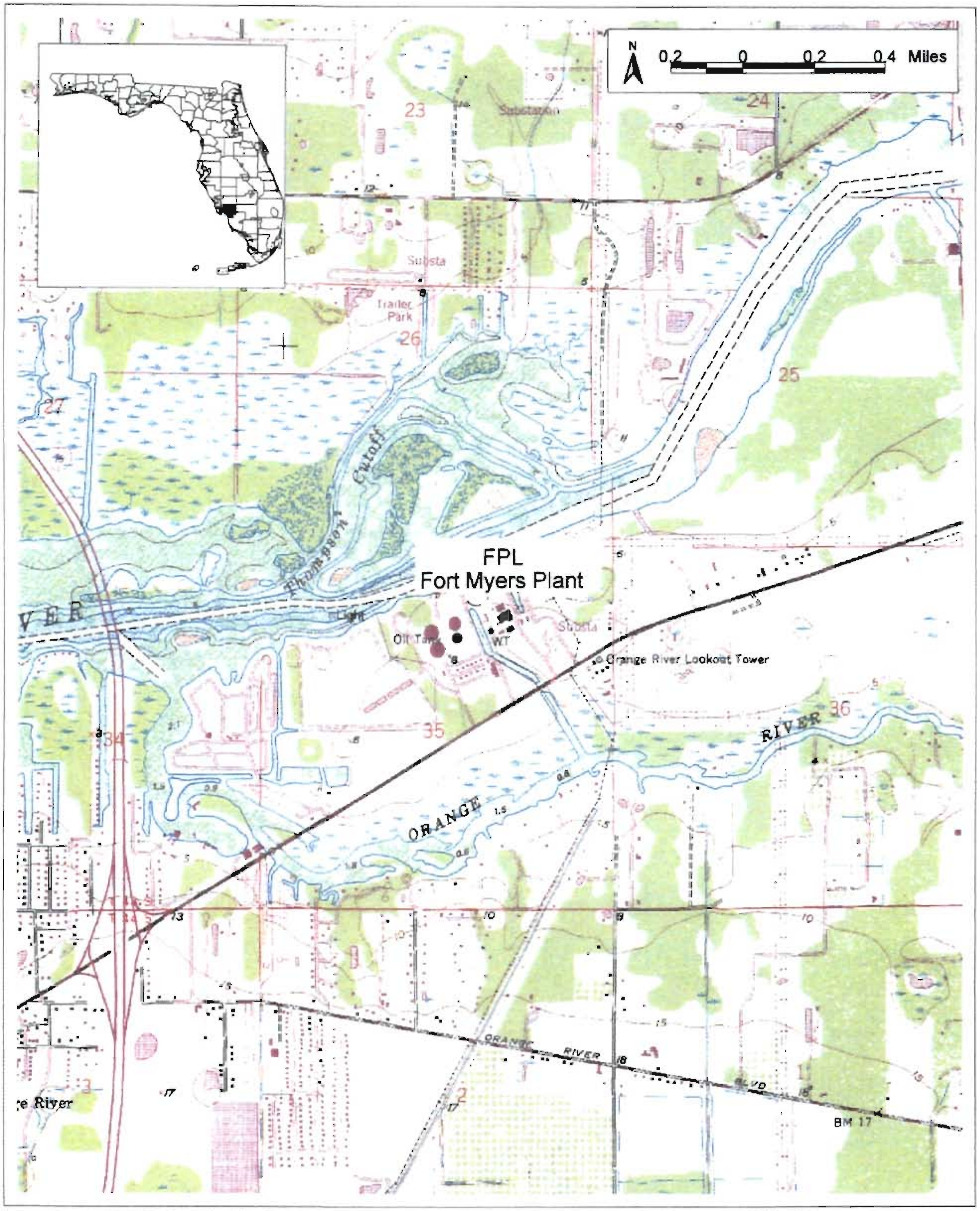
- Section 2.0 presents a description of the facility, including air emissions and stack parameters.
- Section 3.0 provides a review of the PSD and nonattainment requirements applicable in the proposed Project.
- Section 4.0 provides a discussion of the control technology .
- Section 5.0 discusses the ambient air monitoring data and existing source impacts.

- Section 6.0 presents a summary of the air modeling approach and results used in assessing compliance of the proposed Project with ambient air quality standards (AAQS), PSD increments, and good engineering practice (GEP) stack height regulations

Table 1-1. Net Emissions Increases/Decreases for Fort Myers CT Project Base Gas Firing - 7,760 hours; Oil-500 hours; HPM - 500 hours, CF = 100 Percent

Pollutant	Potential (Permitted) for Units 1 and 2	Actual Emissions	Repowering Project	Net Decrease(-) or Increase (+) From Actual (Repowering)	2 GE FA Turbines Simple Cycle	Net Decrease(-) or Increase (+) From Actual (Repowering + New CT's)	PSD SERs (Tons/yr)
PM as TSP	3,115	607	313	-294	91	-203	24
PM10	3,115	607	290	-317	91	-226	15
NO2	17,790	7,095	1,845	-5,250	741	-4,509	40
SO2	68,536	20,561	137	-20,424	91	-20,333	40
CO	3,516	1,507	1,267	-240	280	40	100
VOCs	124	47	82	36	26	62	40

Note: PSD SERs = Prevention of Significant Deterioration Significant Emission Rates.
HPM = Higher Power Modes.
CF = Capacity Factor.



FORT MYERS REPOWERING PROJECT

Figure 1-1
Project Site Location

FPL

2.0 PROJECT DESCRIPTION

2.1 SITE DESCRIPTION

The Fort Myers Plant site, shown in Figure 2-1, consists of 460 acres. The plant elevation will be approximately 13 feet above mean sea level (ft-msl). The terrain surrounding the site is flat.

2.2 EXISTING FORT MYERS PLANT

Units 1 and 2 are existing fossil-fuel-fired steam generators firing residual oil. Unit 1 has a maximum heat input of 1,690 million British thermal units per hour (MMBtu/hr) and Unit 2 has a maximum heat input of 4,000 MMBtu/hr. Air construction permit No. 0710002-004AC authorized construction of the Fort Myers Repowering Project. This prject involves the installation of six natural gas-fired combined cycle units to replace the two residual oil-fired steam generating units. Each combined cycle unit consists of a nominal 170-MW gas-fired combustion turbine with a heat recovery steam generator (HRSG). The Repowering Project results in contemporaneous emission decrease for almost all of the criteria air pollutants.

The existing gas turbine peaking units (GT 1-12) have a maximum heat input of 850 MMBtu/hr each and are operated as peaking units. The maximum sulfur content for the distillate oil is 0.5 percent.

2.3 SIMPLE CYCLE COMBUSTION TURBINES

The proposed project will consist of two General Electric Frame 7FA CTs and associated facilities. The annual operation for these units is based on a capacity factor of 100 percent, which is equivalent to operating 8,760 hours per year at full load. Natural gas will be used as the primary fuel, and fuel oil will be used as a backup fuel. Fuel oil usage will be limited to the equivalent of 500 hours per year at full load. Peak capability or power augmentation operation, when firing natural gas, would not exceed 500 hours per year. This operation is referred to as higher power modes (HPM) and are utilized to supply power above 100 percent base load when firing gas.

Plant performance with General Electric 7FA CTs was developed for natural gas and oil; at 50-, 75-, and 100-percent load; and at 35 degrees Fahrenheit (°F), 59°F, and 95°F compressor inlet temperatures. Combustion turbine performance is based on a performance envelope developed from General Electric data. The CTs will be capable of operating from 50 to 100 percent of baseload. The efficiency of the CTs decreases at part load. As a result, FPL will have an economic incentive to dispatch the plant to keep the units operating as near baseload as possible.

Natural gas will be transported to the units by connecting to the gas lateral being constructed for the Repowering Project and fuel oil will be trucked to the site. The distillate fuel oil will have a maximum sulfur content of 0.05 percent and will be stored onsite in existing aboveground storage tanks.

Air emissions control will consist of using state-of-the-art DLN burners in the CTs when firing natural gas and water injection when firing fuel oil. The General Electric Frame 7FA will be equipped with the General Electric DLN-2.6 combustion system that regulates the distribution of fuel delivery to a multi-nozzle, total premix combustor arrangement. The fuel flow distribution to each combustion system fuel nozzle is regulated to maintain unit load and minimize turbine emissions. The DLN-2.6 combustion system consists of six fuel nozzles per combustion can, with each operating as a fully premixed combustor. Of the six nozzles, five are located radially and one is in the center. The fuel system is fully automated and sequences the DLN-2.6 combustion system through a number of staging modes prior to reaching full load. The General Electric Frame 7FA has 14 combustors per turbine. Water injection will be used for NO_x control when firing distillate fuel oil. The SO_2 emissions will be controlled by the use of low-sulfur fuels. Good combustion practices and clean fuels will also minimize potential emissions of PM, CO, volatile organic compound (VOC), and other pollutants (e.g., trace metals). These engineering and environmental designs maximize control of air emissions while minimizing economic, environmental, and energy impacts.

2.4 PROPOSED SOURCE EMISSIONS AND STACK PARAMETERS

The estimated maximum hourly emissions and exhaust information representative of the proposed CT operating at baseload conditions (100-percent load), 75-percent load and 50-percent load conditions are presented in Tables 2-1 through 2-7. The information is presented in these tables for one unit operating in simple cycle operation, based on natural gas combustion and fuel oil combustion. The data are presented for compressor inlet temperatures of 35°F, 59°F, and 95°F. These temperatures represent the range of ambient temperatures that the CTs are most likely to experience. The performance calculations for the operating conditions are given in Appendix A.

The pollutant gaseous emission concentrations and PM_{10} emission rates for the proposed CTs are as follows:

Pollutant	Natural Gas	Distillate Oil
NO_x, ppmvd @ 15 percent O_2	10.5 (base); 15 (HPM)	42
CO, ppmvd	9 (base); 15 (HPM)	20
VOC as CH_4, ppmvd (gas), ppmvw (oil)	1.5	3.5
SO_x as SO_2	Calculated Based on Fuel (1.0 grains S/100 SCF)	Calculated Based on Fuel (0.05 percent sulfur)
PM_{10} lb/hr (dry filterable)	10	17

Note: lb/hr = pound per hour
ppmvd = parts per million volume dry
ppmvw = parts per million volume wet

The maximum short-term emission rates (lb/hr) generally occur at baseload, 35°F operation, where the CT has the greatest output and greatest fuel consumption.

Based on a compressor inlet temperature of 59°F, the emission rates used to calculate maximum potential annual emissions for the proposed facility for regulated air pollutants are presented in Table 2-8 for one and two CTs. To produce the maximum potential annual emissions, the CTs are being permitted to operate at baseload for 8,760 hours firing natural gas for 7,760 hours with maximum fuel oil operation of 500 hours at full load and 500 hours HPM operation. The potential emissions are based on the 59°F turbine inlet air condition since it represents a nominal average between the higher emission levels at the 35°F turbine inlet conditions (winter) and the relatively infrequent 95°F turbine inlet condition (summer).

Process flow diagrams of the turbine operating at compressor inlet temperature of 95°F, 59°F, and 35°F are presented in Figures 2-2 through 2-4, respectively for the "F" Class CT.

Based on a review of the emission rates for natural gas and fuel oil combustion, the highest emission rates for the regulated pollutants generally occur when firing fuel oil. Combustion of natural gas and fuel oil result in slightly different exhaust flow gas rates and stack exit temperatures; however, the differences are minor. As a result of the higher emissions when firing oil, the air modeling analyses were based on determining maximum ground-level impacts with fuel oil.

As discussed in Section 6.0, the air modeling analyses that addressed compliance with ambient standards were based on modeling the CTs for the operating load and ambient temperature which produced the maximum impacts from the load impact analysis that was performed. Although the highest emission rates occur with low compressor inlet temperatures (i.e., 35°F) and baseload conditions, the lowest exhaust gas flow rates occur with a compressor inlet temperature of 95°F and 50 percent operating load. Since this low exhaust flow condition can result in potentially higher impacts due to lower plume rise (i.e., due to lower exit velocity and temperature), the analysis included modeling the CTs for the following four scenarios which are designed to determine the maximum impacts for the project:

- Base operating load for the turbine at an inlet temperature of 35°F;
- Base operating load for the turbine at an inlet temperature of 95°F;
- A 50-percent operating load for the turbine at an inlet temperature of 35°F; and
- A 50-percent operating load for the turbine at an inlet temperature of 95°F.

The natural gas must be heated to about 300°F for the dry low-NO_x combustors to operate effectively. This will be accomplished, during simple-cycle operation, by installing direct fired natural gas heaters (two). Table 2-9 presents the performance, stack parameters, and emissions data for direct fired heaters. Only natural gas would be used in the direct fired heaters.

Appendix A contains estimated emission for hazardous air pollutants (HAPs). The HAP emissions are based on emission factors from the April 2000 revision of EPA's AP-42 emission factor database.

Except for formaldehyde when firing natural gas, the emission factors are those presented in Tables 3.1-3, 3.1-4, and 3.1-5 of the revised AP-42 section for combustion turbines. For formaldehyde when firing natural gas, a review of EPA's database was conducted and an emission factor was estimated based on comparisons of the turbines and emission characteristics from EPA's database to those proposed for this project. A discussion regarding this review and estimation of the formaldehyde emission factor is presented in the following section.

The recent EPA emission factor suggests formaldehyde emissions from gas turbines of 780 lb/10^{12} Btu when firing natural gas at loads greater than 80 percent. The EPA suggested emission factor for all loads is 3,100 lb/10^{12} Btu.

The emission factors are not appropriate for the proposed CTs based on several factors. First, and most importantly, the data used to develop the AP-42 emission factors are not representative of the General Electric Frame 7FA (170 MW) combustion turbine. Second, a review of the data of the pertinent information in the EPA database that relates to the characteristics clearly suggests a much lower emission factor for formaldehyde. Some of the important aspects of the EPA Gas Turbine Database related to formaldehyde emission are as follows.

- The formaldehyde emissions are from small (<30 MW) gas turbines. The available data are from an average capacity of about 28 MW. More importantly, the median capacity, or the turbine size where an equal number of turbines are above and below that size, is about 15 MW. Data from only 8 large turbines (>30 MW) are included in the EPA database, with a maximum size of 88 MW.
- In contrast to the AP-42 emission factors for formaldehyde which are based on an average value, the median value is substantially lower. For all loads, the median formaldehyde emission factor is about 320 lb/10^{12} Btu; for turbine loads greater than 50 percent, the median emission factor is about 110 lb/10^{12} Btu. Since the median

emission factor is about 8 to ten times lower than the average factor, this clearly points to the large range in formaldehyde emissions and how the individual turbine combustion characteristics can influence the results.

- There is a strong relationship between formaldehyde and CO emissions, as noted by EPA in the support document and, and as observed in the data. Gas turbines with higher CO emissions had higher observed formaldehyde emissions. An evaluation of the coincident CO and formaldehyde data indicates that formaldehyde emissions were 150 lb/10^{12} Btu with CO emissions less than 0.02 lb/mmBtu.

The emission factors for many of the other pollutants were developed with even less data and also are not representative of the state-of-the-art DLN combustion system. The use of the AP-42 emission factors for these pollutants provide an estimate of HAP emissions that are likely very conservative. An evaluation of the HAP emission from the project indicates that emissions are less than 25 tons/year for all HAPs and less than 10 tons/year for a single HAP. Therefore, the requirements of 40 CFR 63.43 for maximum achievable control technology are not applicable to the project.

2.5 SITE LAYOUT, STRUCTURES, AND STACK SAMPLING FACILITIES

A plot plan of the proposed facility is presented in Figure 2-5. A profile of a unit is shown in Figure 2-6. The dimensions of the buildings and structures are presented in Section 6.0. Stack sampling facilities will be constructed in accordance with Rule 62-297.310(6) F.A.C.

Table 2-1. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with DLN Combustors Firing Natural Gas-- Baseload for Simple Cycle Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature 35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,095	1,116	1,143
Velocity (ft/sec)		124.2	120.7	113.6
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	5.1	4.9	4.4
	Basis	1.0 grain S/100CF	1.0 grain S/100CF	1.0 grain S/100CF
PM/PM_{10}	lb/hr	10	10	10
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	71.6	68.4	61.9
	Basis	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2
CO	lb/hr	30.3	28.8	26.2
	Basis	9 ppmvd	9 ppmvd	9 ppmvd
VOC[c] (as methane)	lb/hr	2.9	2.7	2.5
	Basis	1.5 ppmvd	1.5 ppmvd	1.5 ppmvd
Sulfuric Acid Mist	lb/hr	0.39	0.38	0.34
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-2. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with DLN Combustors Firing Natural Gas-- 75 Percent Load for Simple Cycle Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature 35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,122	1,139	1,170
Velocity (ft/sec)		101.6	99.9	95.6
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	4.1	4.0	3.6
	Basis	1.0 grain S/100CF	1.0 grain S/100CF	1.0 grain S/100CF
PM/PM_{10}	lb/hr	10	10	10
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	57.0	54.9	50.3
	Basis	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2
CO	lb/hr	24.4	23.5	21.7
	Basis	9 ppmvd	9 ppmvd	9 ppmvd
VOC[c] (as methane)	lb/hr	2.3	2.2	2.1
	Basis	1.5 ppmvd	1.5 ppmvd	1.5 ppmvd
Sulfuric Acid Mist	lb/hr	0.32	0.30	0.28
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-3. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with DLN Combustors Firing Natural Gas-- 50 Percent Load for Simple Cycle Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature 35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,168	1,184	1,200
Velocity (ft/sec)		86.1	85.1	81.8
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	3.3	3.2	2.9
	Basis	1.0 grain S/100CF	1.0 grain S/100CF	1.0 grain S/100CF
PM/PM_{10}	lb/hr	10	10	10
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	45.2	43.7	40.2
	Basis	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2	10.5 ppmvd at 15% O_2
CO	lb/hr	20.1	19.5	18.3
	Basis	9 ppmvd	9 ppmvd	9 ppmvd
VOC[c] (as methane)	lb/hr	1.9	1.9	1.7
	Basis	1.5 ppmvd	1.5 ppmvd	1.5 ppmvd
Sulfuric Acid Mist	lb/hr	0.25	0.24	0.23
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-4. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with Water Injection Firing Distillate Fuel Oil-- Baseload for Simple Cycle Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature 35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,074	1,098	1,131
Velocity (ft/sec)		128.2	124.4	115.6
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	103.1	98.6	89.1
	Basis	0.05 % S	0.05 % S	0.05 % S
PM/PM_{10}	lb/hr	17.0	17.0	17.0
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	333.8	319.2	284.8
	Basis	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2
CO	lb/hr	68.1	64.7	58.2
	Basis	20 ppmvd	20 ppmvd	20 ppmvd
VOC[c] (as methane)	lb/hr	7.6	7.3	6.6
	Basis	3.5 ppmvw	3.5 ppmvw	3.5 ppmvw
Sulfuric Acid Mist	lb/hr	7.9	7.6	6.8
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet; ppmvw = parts per million volume wet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-5. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with Water Injection Firing Distillate Fuel Oil-- 75 Percent Load for Simple Cycle Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature		
		35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,121	1,137	1,166
Velocity (ft/sec)		103.3	101.5	97.4
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	82.0	78.8	72.2
	Basis	0.05 % S	0.05 % S	0.05 % S
PM/PM_{10}	lb/hr	17	17	17
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	262.6	252.6	231.2
	Basis	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2
CO	lb/hr	64.1	62.1	58.0
	Basis	24 ppmvd	24 ppmvd	24 ppmvd
VOC[c] (as methane)	lb/hr	6.0	5.8	5.5
	Basis	3.5 ppmvw	3.5 ppmvw	3.5 ppmvw
Sulfuric Acid Mist	lb/hr	6.3	6.0	5.5
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet; ppmvw = parts per million volume wet

[a] Refer to Appendix A for detailed information.
[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).
[c] VOC emissions exclusive of background VOC concentrations.

Table 2-6. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with Water Injection Firing Distillate Fuel Oil-- 50 Percent Load for Simple Cycle Operation

		Operating and Emission Data[a] for Compressor Inlet Temperature		
Parameter		35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,168	1,182	1,200
Velocity (ft/sec)		87.2	86.3	83.6
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	64.7	62.6	57.7
	Basis	0.05 % S	0.05 % S	0.05 % S
PM/PM_{10}	lb/hr	17	17	17
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	205.6	198.9	183.2
	Basis	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2	42 ppmvd at 15% O_2
CO	lb/hr	77.5	75.7	71.8
	Basis	35 ppmvd	35 ppmvd	35 ppmvd
VOC[c] (as methane)	lb/hr	4.9	4.8	4.6
	Basis	3.5 ppmvw	3.5 ppmvw	3.5 ppmvw
Sulfuric Acid Mist	lb/hr	5.0	4.8	4.4
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet; ppmvw = parts per million volume wet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-7. Stack, Operating, and Emission Data for the Proposed GE 7FA Combustion Turbine with DLN Combustors Firing Natural Gas-- Higher Power Modes Operation

Parameter		Operating and Emission Data[a] for Compressor Inlet Temperature		
		35°F	59°F	95°F
Stack Data (ft)				
Height (minimum)		80	80	80
Diameter (maximum)		20.5	20.5	20.5
Operating Data				
Temperature (°F)		1,109	1,130	1,158
Velocity (ft/sec)		125.7	122.5	118.5
Maximum Hourly Emission per Unit[b]				
SO_2	lb/hr	5.3	5.1	4.8
	Basis	1.0 grain S/100CF	1.0 grain S/100CF	1.0 grain S/100CF
PM/PM_{10}	lb/hr	10	10	10
	Basis	Dry filterables	Dry filterables	Dry filterables
NO_x	lb/hr	105.1	101.3	95.5
	Basis	15 ppmvd at 15% O_2	15 ppmvd at 15% O_2	15 ppmvd at 15% O_2
CO	lb/hr	50.5	48.0	44.7
	Basis	15 ppmvd	15 ppmvd	15 ppmvd
VOC[c] (as methane)	lb/hr	2.9	2.7	2.6
	Basis	1.5 ppmvd	1.5 ppmvd	1.5 ppmvd
Sulfuric Acid Mist	lb/hr	0.41	0.39	0.37
	Basis	5% SO_2	5% SO_2	5% SO_2

Note: ppmvd = parts per million volume dry; O_2 = oxygen; S = sulfur; CF = cubic feet

[a] Refer to Appendix A for detailed information.

[b] Other regulated pollutants are assumed to have minor to negligible emissions. These pollutants include lead, reduced sulfur compounds, hydrogen sulfide, fluorides, beryllium, mercury, MWC organics, MWC metals, and MWC acid gases (see Appendix A).

[c] VOC emissions exclusive of background VOC concentrations.

Table 2-8. Maximum Potential Emissions (tons/year) for the FPL Fort Myers Simple Cycle CT Project

Pollutant	CT Units	Hours	Load at 59 °F Turbine Inlet 100%	75%	50%	Units	Hours	Load at 59 °F Turbine Inlet 100%	75%	50%
	Natural Gas Firing[a]									
PM	1	8,760	43.8	43.8	43.8	2	7760	77.6	77.6	77.6
SO_2	1	8,760	21.5	17.4	14.0	2	7760	38.0	30.8	24.8
NO_x	1	8,760	299.7	240.6	191.4	2	7760	531.0	426.4	339.2
CO	1	8,760	126.0	102.9	85.6	2	7760	223.3	182.4	151.7
VOC	1	8,760	12.0	9.8	8.2	2	7760	21.3	17.4	14.4
	Distillate Oil Firing[b]									
PM	1	500	4.3	4.3	4.3	2	500	8.5	8.5	8.5
SO_2	1	500	24.6	19.7	15.7	2	500	49.3	39.4	31.3
NO_x	1	500	79.8	63.2	49.7	2	500	159.6	126.3	99.4
CO	1	500	16.2	15.5	18.9	2	500	32.3	31.0	37.8
VOC	1	500	1.8	1.4	1.2	2	500	3.6	2.9	2.4
	Higher Power Modes[c]									
PM	1	500	2.5	NA	NA	2	500	5.0	NA	NA
SO_2	1	500	1.3	NA	NA	2	500	2.6	NA	NA
NO_x	1	500	25.3	NA	NA	2	500	50.6	NA	NA
CO	1	500	12.0	NA	NA	2	500	24.0	NA	NA
VOC	1	500	0.7	NA	NA	2	500	1.4	NA	NA
	Total Potential Emissions[d]									
PM	1	8,760	45.6	45.6	45.6	2	8,760	91.1	81.7	81.7
SO_2	1	8,760	44.9	36.1	28.8	2	8,760	89.9	68.5	54.7
NO_x	1	8,760	370.6	290.1	230.2	2	8,760	741.3	528.3	419.3
CO	1	8,760	139.8	112.6	99.6	2	8,760	279.6	203.0	180.9
VOC	1	8,760	13.1	10.7	8.9	2	8,760	26.3	19.3	16.0

Notes: [a] 8,760 hours per year operation as shown for one unit in Tables B-2, B-6 and B-10.
[b] 500 hours per year of oil firing as shown for one unit in Tables B-14, B-18 and B-22.
[c] 500 hours of higher power modes firing gas firing as shown for one unit in Table B-26.
[d] for 75% and 50% load the emssions are based on 8,260 hours gas firing and 500 hours of oil firing.

Table 2-9. Performance, Stack Parameters and Emissions for Natural Gas Heaters, Fort Myers Peaking Units

	Natural Gas Heater
Performance[a]	
Fuel Usage (scf/hr-gas)	23,218
Heat Input (mmBtu/hr-HHV)	23.71
Hours per Year	8,760
Maximum Fuel Usage (mmscf/yr)	203.39
Number of Units	2
Stack Parameters	
Diameter (ft)	1.5
Height (ft)	30
Temperature (°F)	713
Velocity (ft/sec)	55
Flow (acfm)	11,736
Emissions	
SO_2 -Basis (grains S/100 scf-gas; %S diesel)[b]	1
(lb/hr)	0.066
(tpy) - one unit	0.291
(tpy) - maximum[a]	0.581
NO_x - (lb/mmBtu)[c]	0.100
(lb/hr)	2.360
(tpy)	10.337
(tpy) - maximum[a]	20.674
CO - (lb/mmBtu)[c]	0.075
(lb/hr)	1.790
(tpy)	7.840
(tpy) - maximum[a]	15.680
VOC - (lb/mmBtu)[c]	0.004
(lb/hr)	0.102
(tpy)	0.447
(tpy) - maximum[a]	0.894
PM/PM10 - (lb/10^6 ft^3)[d]	6.200
(lb/hr)	0.144
(tpy)	0.631
(tpy) - maximum[a]	1.261

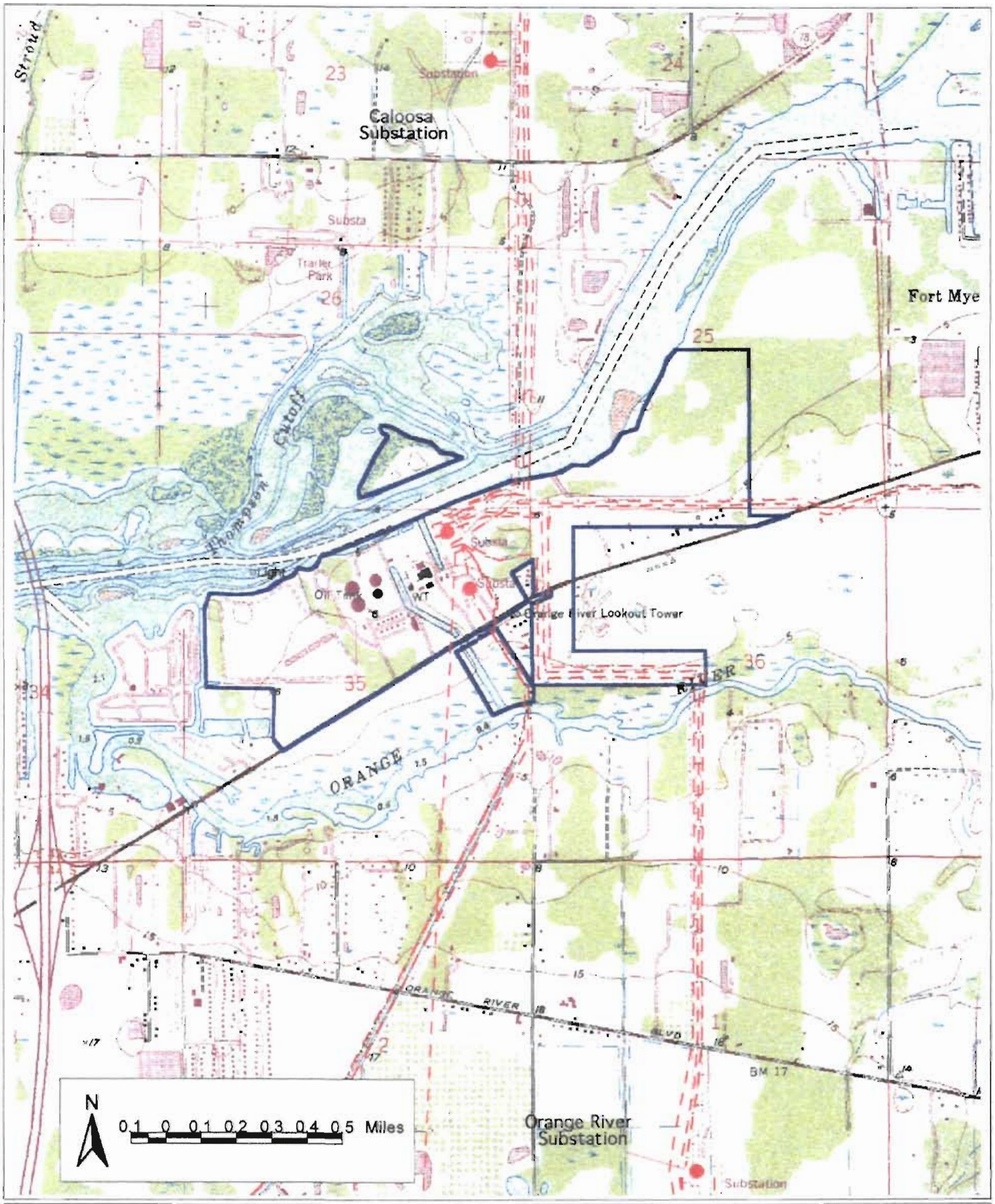
Notes:

a - GasTech, 2000.

b - Typical maximum for pipeline natural gas.

c - vendor information (GasTech)

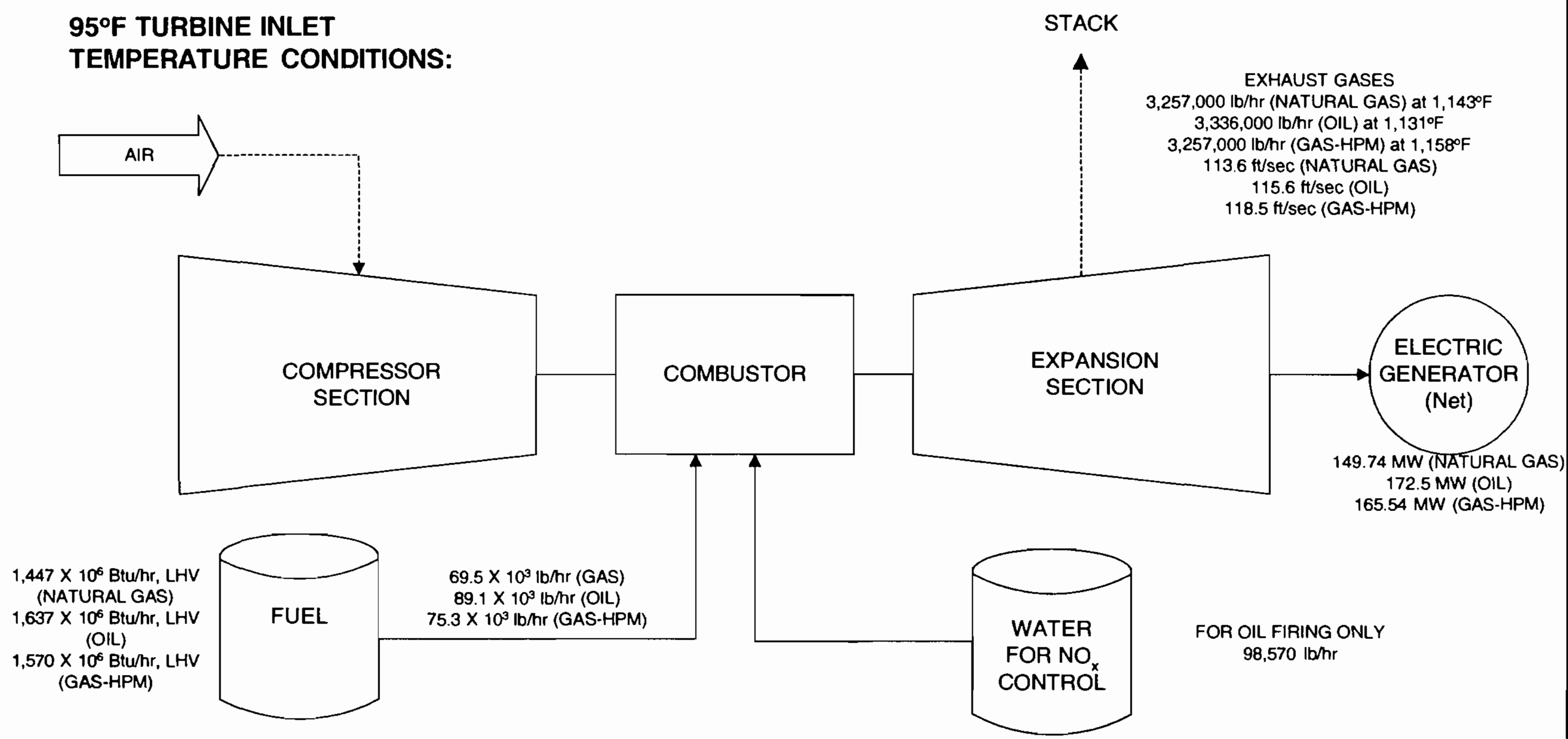
d - AP-42 Table 1.4-2 Filterable PM; higher factor used for small heater; Table 3.3-1 PM-10



FORT MYERS REPOWERING PROJECT

Figure 2-1
Property Boundary of the Fort Myers Plant Site

FPL



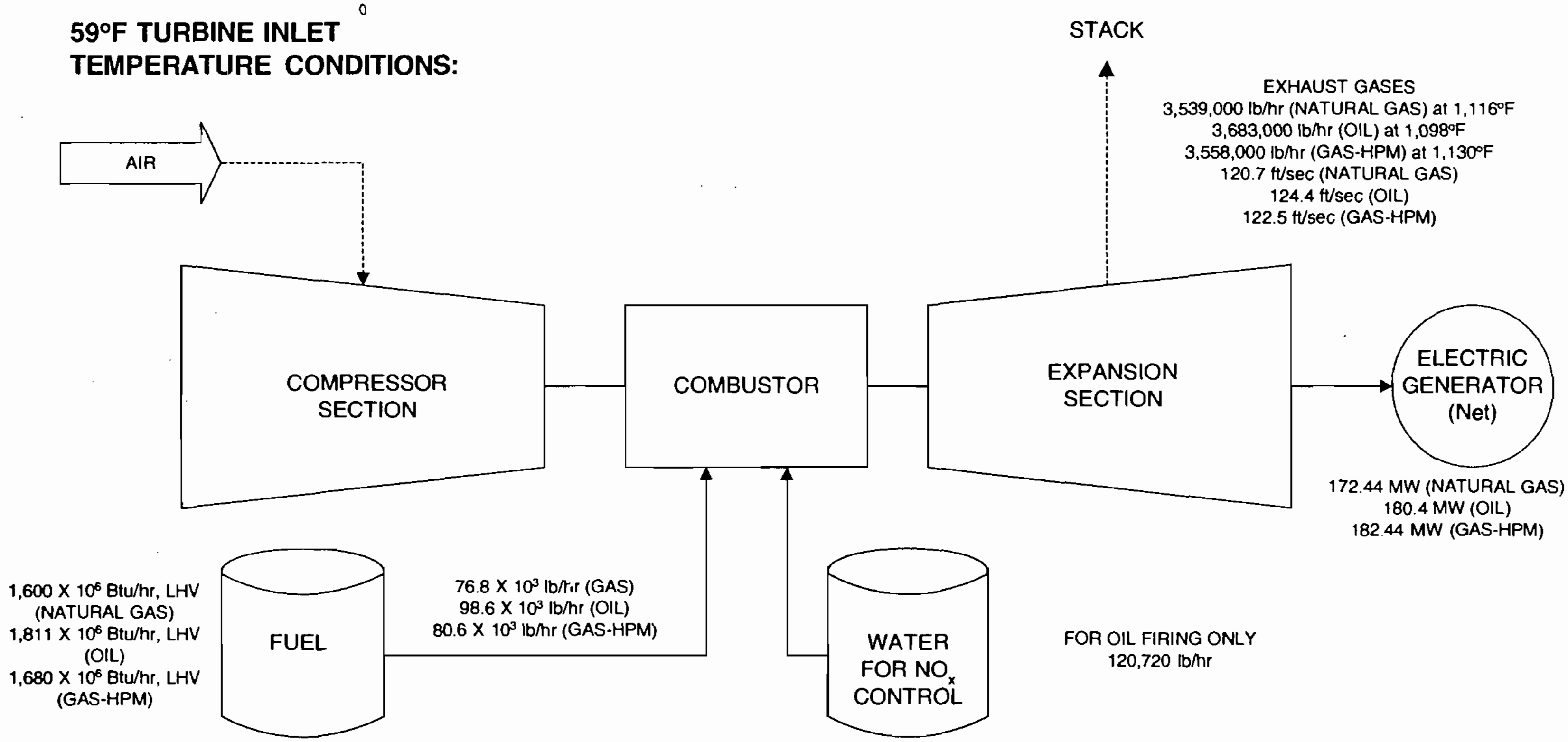
NOTE: SEE APPENDIX A FOR DESIGN INFORMATION AND STACK PARAMETERS FOR EACH FUEL.

Figure 2-2
Simplified Flow Diagram of GE FRAME 7FA Combustion Turbine
Baseload, Summer Design Conditions

Process Flow Legend
Solid/Liquid
Gas
Steam

Filename: 9937613Y\F1\WP\FIGURES.VSD
Date: 7/14/00

Golder Associates



NOTE: SEE APPENDIX A FOR DESIGN INFORMATION AND STACK PARAMETERS FOR EACH FUEL.

Figure 2-3
Simplified Flow Diagram of GE FRAME 7FA Combustion Turbine
Baseload, Annual Design Conditions

Process Flow Legend
Solid/Liquid ⟶
Gas - - - - ➝
Steam ········➝

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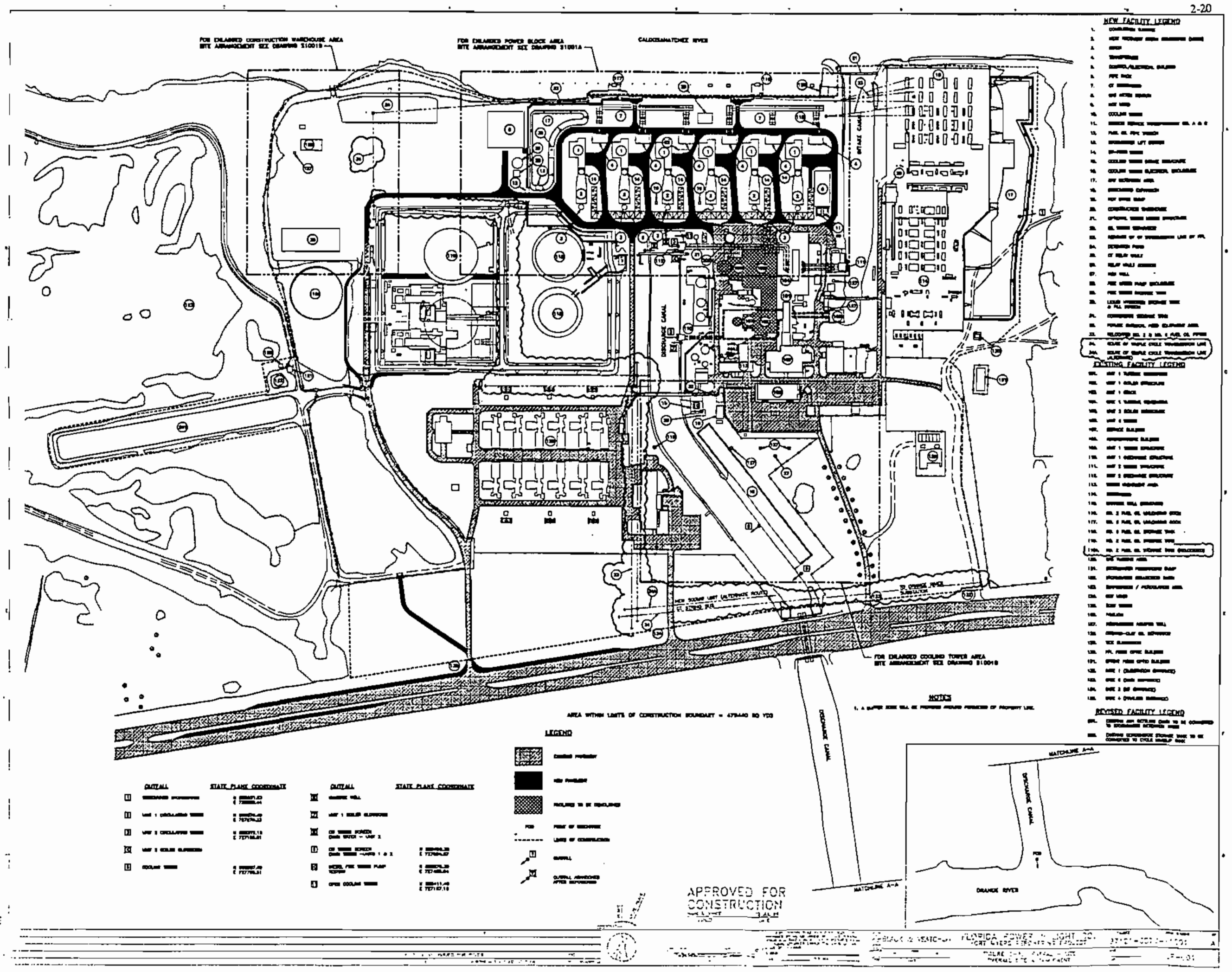


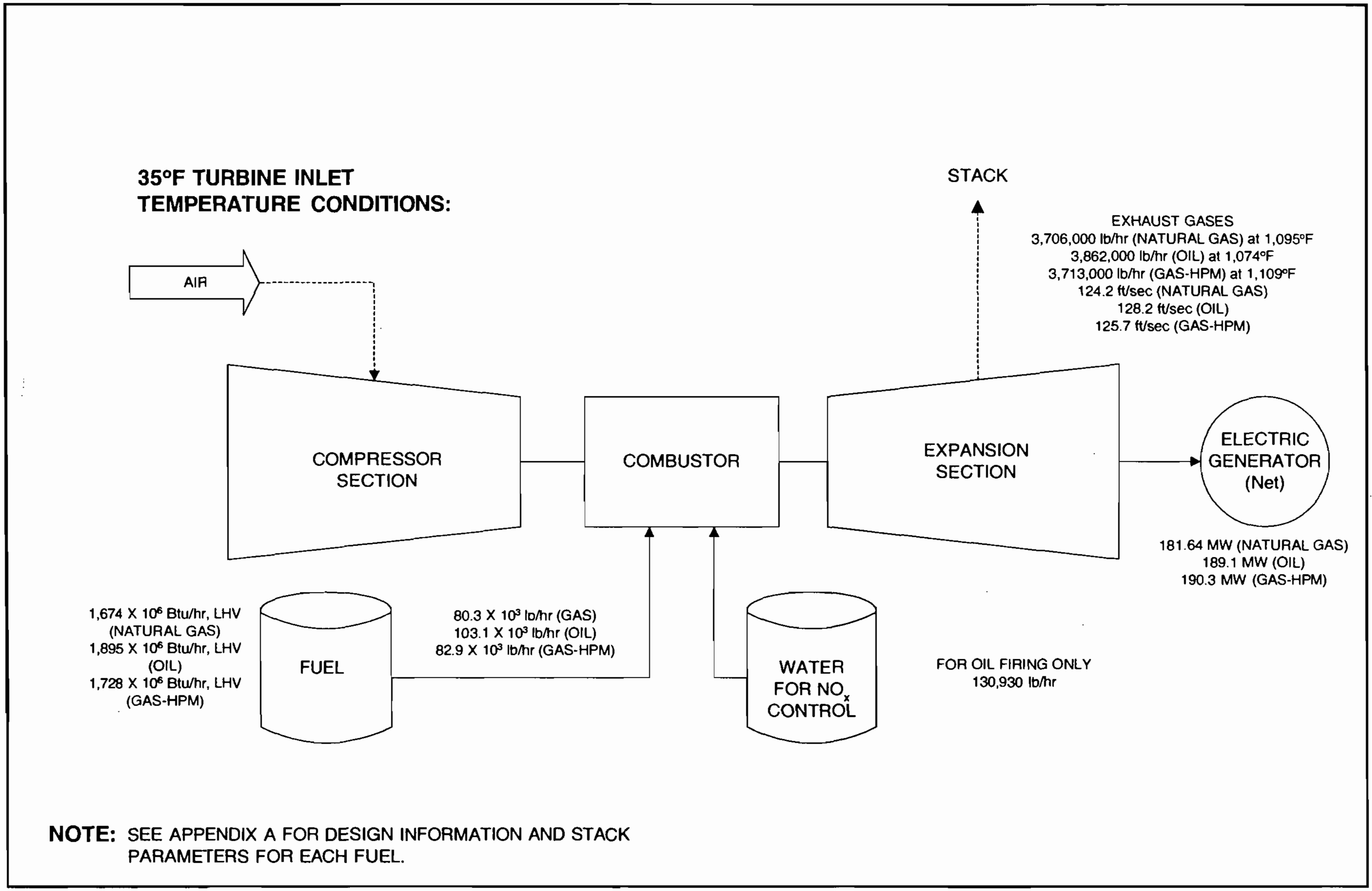
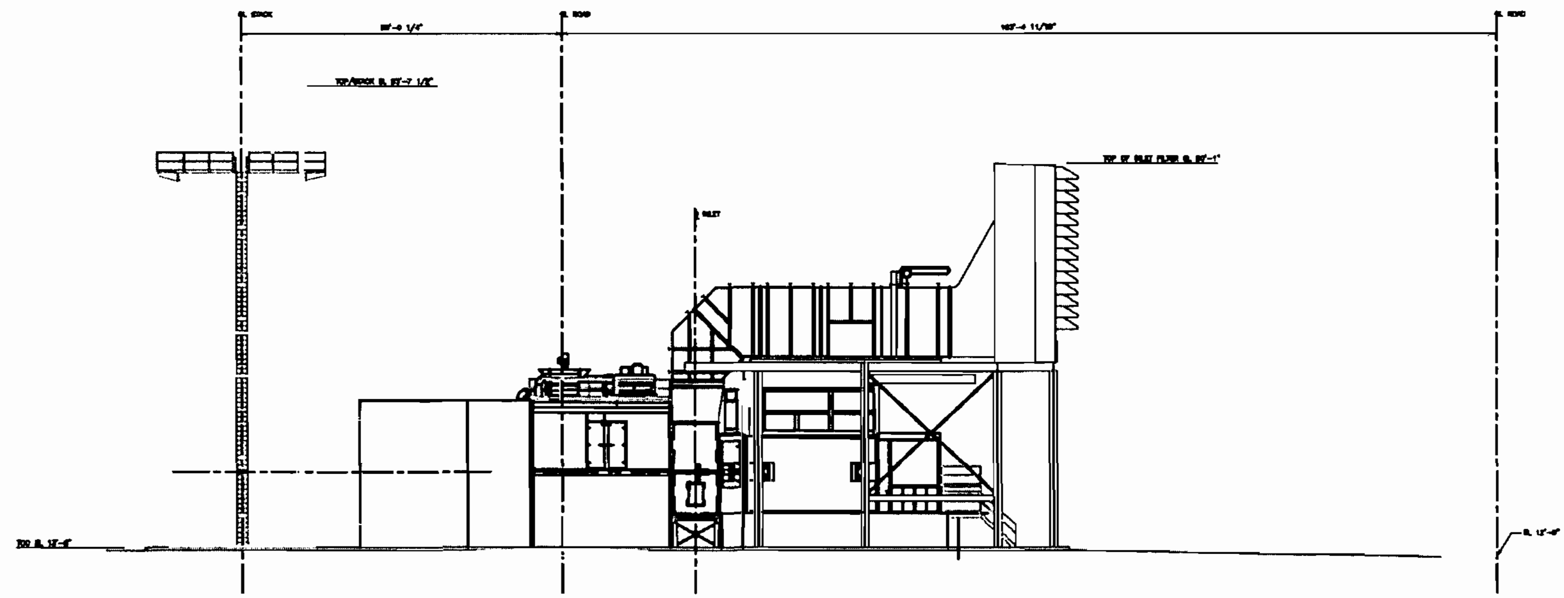


Figure 2-4
Simplified Flow Diagram of GE FRAME 7FA Combustion Turbine
Baseload, Winter Design Conditions

Process Flow Legend	
Solid/Liquid	——→
Gas	- - - -→
Steam	·······→

Filename: 9937613Y\F1\WP\FIGURES.VSD
Date: 7/14/00

Golder Associates



(LOOKING NORTH)

BLACK & VEATCH

FLORIDA POWER AND LIGHT CO.
FT MEYERS REPOWERING PROJECT

SITE ARRANGEMENT
CT ELEVATION

097121-CSTU-S1010 | A

FIGURE 2-6

3.0 AIR QUALITY REVIEW REQUIREMENTS AND APPLICABILITY

The following discussion pertains to the federal and state air regulatory requirements and their applicability to the proposed project.

3.1 NATIONAL AND STATE AAQS

The existing national and Florida AAQS are presented in Table 3-1. National primary AAQS were promulgated to protect the public health with an adequate margin of safety [42 United States Code (USC) Section 7409(b)(1)]. The primary AAQS are designed to protect children, the elderly, and those with respiratory diseases. National secondary AAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air [42 USC Section 7409(b)(2)]. Areas of the country in violation of AAQS are designated as nonattainment areas, and new sources to be located in or near these areas may be subject to more stringent air permitting requirements.

3.2 PSD REQUIREMENTS

3.2.1 GENERAL REQUIREMENTS

Under federal and State of Florida PSD review requirements, all new or modified major sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a permit issued before the commencement of construction. Florida's State Implementation Plan (SIP), which contains PSD regulations, has been approved by EPA; therefore, PSD approval authority has been granted to DEP. For projects reviewed under the Power Plant Siting Act (PPSA) the PSD program is delegated.

A "major facility" is defined as any one of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more, or any other stationary facility that has the potential to emit 250 TPY or more, of any pollutant regulated under CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment.

Subject to certain exceptions, a "major modification" is defined under PSD regulations as a physical or operational change at an existing major facility that increases the facility's emissions by an amount that is greater than the defined significant emission rates. PSD significant emission rates are shown in Table 3-2.

EPA's regulations identify certain increases above an air quality baseline concentration level of SO_2, PM_{10}, and NO_2 concentrations that would constitute significant deterioration. The EPA class designations and allowable PSD increments are presented in Table 3-1. The State of Florida has adopted the EPA class designations and allowable PSD increments for SO_2, PM_{10}, and NO_2 increments.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in 40 CFR 52.21, *Prevention of Significant Deterioration of Air Quality*. The State of Florida has adopted PSD regulations which have been approved by EPA [Rule 62-212.400 F.A.C.]. Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

1. Control technology review,
2. Source impact analysis,
3. Air quality analysis (monitoring),
4. Source information, and
5. Additional impact analyses.

In addition to these analyses, a new facility also must be reviewed with respect to GEP stack height regulations. Discussions concerning each of these requirements are presented in the following sections.

3.2.2 CONTROL TECHNOLOGY REVIEW

The control technology review requirements of the federal and state PSD regulations require that all applicable federal and state emission-limiting standards be met, and that BACT be applied to control emissions from the source (Rule 62-212.410, F.A.C.). The BACT requirements are applicable to all regulated pollutants for which the increase in emissions from the facility or modification exceeds the significant emission rate (see Table 3-2).

BACT is defined in 52.21 (b)(12) and Rule 62-210.200(40), F.A.C., as:

> An emissions limitation (including a visible emission standard) based on the maximum degree of reduction of each pollutant subject to regulation under the Act which would be emitted by any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular part of a source or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results.

BACT was promulgated within the framework of the PSD requirements in the 1977 amendments of the CAA [Public Law 95-95; Part C, Section 165(a)(4)]. The primary purpose of BACT is to optimize consumption of PSD air quality increments and thereby enlarge the potential for future economic growth without significantly degrading air quality (EPA, 1978; 1980). Guidelines for the evaluation of BACT can be found in EPA's *Guidelines for Determining Best Available Control Technology (BACT)* (EPA, 1978) and in the *PSD Workshop Manual* (EPA, 1980). These guidelines were promulgated by EPA to provide a consistent approach to BACT and to ensure that the impacts of alternative emission control systems are measured by the same set of parameters. In addition, through implementation of these guidelines, BACT in one area may not be identical to BACT in another area. According to EPA (1980), "BACT analyses for the same types of emissions unit and the same pollutants in different locations or situations may determine that different control strategies should be applied to the different sites, depending on site-specific factors. Therefore, BACT analyses must be conducted on a case-by-case basis."

The BACT requirements are intended to ensure that the control systems incorporated in the design of a proposed facility reflect the latest in control technologies used in a particular industry and take into consideration existing and future air quality in the vicinity of the proposed facility. BACT must, as a minimum, demonstrate compliance with new source performance standards (NSPS) for a source (if applicable). An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than the proposed control technology, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems, as well as the environmental benefits derived from these systems. A decision on BACT is to be based on sound judgment, balancing environmental benefits with energy, economic, and other impacts (EPA, 1978).

Historically, a "bottom-up" approach consistent with the BACT Guidelines and PSD Workshop Manual has been used. With this approach, an initial control level, which is usually NSPS, is evaluated against successively more stringent controls until a BACT level is selected. However, EPA became concerned that the bottom-up approach was not providing the level of BACT decisions originally intended. As a result, in December 1987, the EPA Assistant Administrator for Air and Radiation mandated changes in the implementation of the PSD program, including the adoption of a new "top-down" approach to BACT decision making.

The top-down BACT approach essentially starts with the most stringent (or top) technology and emissions limit that have been applied elsewhere to the same or a similar source category. The applicant must next provide a basis for rejecting this technology in favor of the next most stringent technology or propose to use it. Rejection of control alternatives may be based on technical or economic infeasibility. Such decisions are made on the basis of physical differences (e.g., fuel type), locational differences (e.g., availability of water), or significant differences that may exist in the environmental, economic, or energy impacts. The differences between the proposed facility and the facility on which the control technique was applied previously must be justified. EPA has issued a draft guidance document on the top-down approach entitled *Top-Down Best Available Control Technology Guidance Document* (EPA, 1990).

3.2.3 SOURCE IMPACT ANALYSIS

A source impact analysis must be performed for a proposed major source subject to PSD review for each pollutant for which the increase in emissions exceeds the significant emission rate (Table 3-2). The PSD regulations specifically provide for the use of atmospheric dispersion models in performing impact analyses, estimating baseline and future air quality levels, and determining compliance with AAQS and allowable PSD increments. Designated EPA models normally must be used in performing the impact analysis. Specific applications for other than EPA-approved models require EPA's consultation and prior approval. Guidance for the use and application of dispersion models is presented in the EPA publication Guideline on Air Quality Models (Revised). The source impact analysis for criteria pollutants that addresses compliance with AAQS and PSD Class II increments may be limited to the new or modified source if the net increase in impacts as a result of the new or modified source is below the significance levels, as presented in Table 3-1.

The EPA has proposed significant impact levels (SILs) for Class I areas. The NPS, as the designated agency for oversight in air quality impacts to Class I areas, has also recommended significant impact levels for PSD Class I areas. The EPA proposed Class I SILs are as follows:

Pollutant	Averaging Time	Proposed EPA PSD Class I Significant Impact Levels ($\mu g/m^3$)
SO_2	3-hour	1
	24-hour	0.2
	Annual	0.1
PM_{10}	24-hour	0.3
	Annual	0.2
NO_2	Annual	0.1

[a] $\mu g/m^3$ = micrograms per cubic meter.

Although these levels have not been officially promulgated as part of the PSD review process and may not be binding for states in performing PSD review, the proposed levels serve as a guideline in assessing a source's impact in a Class I area. The EPA action to incorporate Class I significant impact levels in the PSD process is part of implementing NSR provisions of the 1990 CAA Amendments. Because the process of developing the regulations will be lengthy, EPA believes that the proposed rules concerning the significant impact levels is appropriate in order to assist states in implementing the PSD permit process.

Various lengths of record for meteorological data can be used for impact analysis. A 5-year period can be used with corresponding evaluation of highest, second-highest short-term concentrations for comparison to AAQS or PSD increments. The term "HSH" refers to the highest of the second-highest concentrations at all receptors (i.e., the highest concentration at each receptor is discarded). The second-highest concentration is significant because short-term AAQS specify that the standard should not be exceeded at any location more than once a year. If fewer than 5 years of meteorological data are used in the modeling analysis, the highest concentration at each receptor normally must be used for comparison to air quality standards.

The term "baseline concentration" evolves from federal and state PSD regulations and refers to a concentration level corresponding to a specified baseline date and certain additional baseline sources. By definition, in the PSD regulations as amended August 7, 1980, baseline concentration means the ambient concentration level that exists in the baseline area at the time of the applicable baseline date. A baseline concentration is determined for each pollutant for which a baseline date is established and includes:

1. The actual emissions representative of facilities in existence on the applicable baseline date; and
2. The allowable emissions of major stationary facilities that commenced construction before January 6, 1975, for SO_2 and PM (TSP) concentrations, or February 8, 1988, for NO_2 concentrations, but that were not in operation by the applicable baseline date.

The following emissions are not included in the baseline concentration and therefore affect PSD increment consumption:

1. Actual emissions from any major stationary facility on which construction commenced after January 6, 1975, for SO_2 and PM (TSP) concentrations, and after February 8, 1988, for NO_2 concentrations; and
2. Actual emission increases and decreases at any stationary facility occurring after the baseline date.

In reference to the baseline concentration, the term "baseline date" actually includes three different dates:

1. The major facility baseline date, which is January 6, 1975, in the cases of SO_2 and PM (TSP), and February 8, 1988, in the case of NO_2.
2. The minor facility baseline date, which is the earliest date after the trigger date on which a major stationary facility or major modification subject to PSD regulations submits a complete PSD application.
3. The trigger date, which is August 7, 1977, for SO_2 and PM (TSP), and February 8, 1988, for NO_2.

The minor source baseline date for SO_2 and PM (TSP) has been set as December 27, 1977, for the entire State of Florida [Rule 62-204.360(1) and (2), F.A.C.]. The minor source baseline for NO_2 has been set as March 28, 1988 [Rule 62-204.360(3), F.A.C.]. It should be noted that references to PM (TSP) are also applicable to PM_{10}.

3.2.4 AIR QUALITY MONITORING REQUIREMENTS

In accordance with requirements of 40 CFR 52.21(m) and Rule 62-212.400(5)(f), F.A.C., any application for a PSD permit must contain an analysis of continuous ambient air quality data in the area affected by the proposed major stationary facility or major modification. For a new major facility, the affected pollutants are those that the facility potentially would emit in significant amounts. For a major modification, the pollutants are those for which the net emissions increase exceeds the significant emission rate (see Table 3-2).

Ambient air monitoring for a period of up to 1 year generally is appropriate to satisfy the PSD monitoring requirements. A minimum of 4 months of data is required. Existing data from the vicinity of the proposed source may be used if the data meet certain quality assurance requirements; otherwise, additional data may need to be gathered. Guidance in designing a PSD monitoring network is provided in EPA's *Ambient Monitoring Guidelines for Prevention of Significant Deterioration* (EPA, 1987a).

The regulations include an exemption that excludes or limits the pollutants for which an air quality analysis must be conducted. This exemption states that Florida DEP exempts a proposed major stationary facility or major modification from the monitoring requirements with respect to a particular pollutant if the emissions increase of the pollutant from the facility or modification would cause, in any area, air quality impacts less than the *de minimis* levels presented in Table 3-2 (Rule 62-212.400-3, F.A.C.).

3.2.5 SOURCE INFORMATION/GOOD ENGINEERING PRACTICE STACK HEIGHT

Source information must be provided to adequately describe the proposed project. The general type of information required for this project is presented in Section 2.0.

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant not be affected by a stack height that exceeds GEP or any other dispersion technique. On July 8, 1985, EPA promulgated final stack height regulations (EPA, 1985a). Identical regulations have been adopted by Florida DEP (Rule 62-210.550, F.A.C.). GEP stack height is defined as the highest of:

1. 65 m; or
2. A height established by applying the formula:

   $Hg = H + 1.5L$

   where: Hg = GEP stack height,

   H = Height of the structure or nearby structure, and

   L = Lesser dimension (height or projected width) of nearby structure(s); or
3. A height demonstrated by a fluid model or field study.

"Nearby" is defined as a distance up to five times the lesser of the height or width dimensions of a structure or terrain feature, but not greater than 0.8 km. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height, the actual stack height may be greater.

The stack height regulations also allow increased GEP stack height beyond that resulting from the above formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or predicted to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain that exceeds the height calculated by the GEP stack height formula.

3.2.6 ADDITIONAL IMPACT ANALYSIS

In addition to air quality impact analyses, federal and State of Florida PSD regulations require analyses of the impairment to visibility and the impacts on soils and vegetation that would occur as a result of the proposed source [40 CFR 52.21(o); Rule 62-212.400(5)(e), F.A.C.]. These analyses are to be conducted primarily for PSD Class I areas. Impacts as a result of general commercial, residential, industrial, and other growth associated with the source also must be addressed. These analyses are required for each pollutant emitted in significant amounts (Table 3-2).

3.3 NONATTAINMENT RULES

Based on the current nonattainment provisions (Rule 62-212.500, F.A.C.), all major new facilities and modifications to existing major facilities located in a nonattainment area must undergo nonattainment review. A new major facility is required to undergo this review if the proposed pieces of equipment have the potential to emit 100 TPY or more of the nonattainment pollutant. A major modification at a major facility is required to undergo review if it results in a significant net emission increase of 40 TPY or more of the nonattainment pollutant or if the modification is major (i.e., 100 TPY or more).

For major facilities or major modifications that locate in an attainment or unclassifiable area, the nonattainment review procedures apply if the source or modification is located within the area of influence of a nonattainment area. The area of influence is defined as an area that is outside the boundary of a nonattainment area but within the locus of all points that are 50 km outside the boundary of the nonattainment area. Based on Rule 62-2.500(2)(c)2.a., F.A.C., all VOC sources that are located within an area of influence are exempt from the provisions of NSR for nonattainment areas. Sources that emit other nonattainment pollutants and are located within the area of influence are subject to nonattainment review unless the maximum allowable emissions from the proposed source do not have a significant impact within the nonattainment area.

3.4 EMISSION STANDARDS

3.4.1 NEW SOURCE PERFORMANCE STANDARDS

The NSPS are a set of national emission standards that apply to specific categories of new sources. As stated in the CAA Amendments of 1977, these standards "shall reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction the Administrator determines has been adequately demonstrated."

The proposed project will be subject to one or more NSPS. The CTs will be subject to 40 CFR Part 60, Subpart GG.

3.4.1.1 Combustion Turbine

The CTs will be subject to emission limitations covered under Subpart GG, which limits NO_x and SO_2 emissions from all stationary CTs with a heat input at peak load equal to 10.7 gigajoules per hour [10 million British thermal units per hour (mmBtu/hr)], based on the lower heating value of the fuel fired.

NO_x emissions are limited to 75 ppmvd corrected to 15 percent oxygen and heat rate while sulfur dioxide emissions are limited to using a fuel with a sulfur content of 0.8 percent. In addition to emission limitations, there are requirements for notification, record keeping, reporting, performance testing and monitoring. These are summarized below:

40 CFR 60.7 Notification and Record Keeping

(a)(1) Notification of the date of construction - 30 days after such date.

(a)(2) Notification of the date of initial start-up - no more than 60 days or less than 30 days prior to date.

(a)(3) Notification of actual date of initial start-up - within 15 days after such date.

(a)(5) Notification of date which demonstrates continuous emission monitoring (CEM) - not less than 30 days prior to date.

60.7 (b) Maintain records of the start-up, shutdown, and malfunction quarterly.

(c) Excess emissions reports - by the 30th day following end of quarter. (required even if no excess emissions occur)

(d) Maintain file of all measurements for two years.

60.8 Performance Tests

(a) must be performed within 60 days after achieving maximum production rate but no later than 180 days after initial start-up.

(d) Notification of Performance tests at least 30 days prior to them occurring.

40 CFR Subpart GG

60.334 Monitoring of Operations

(a) continuous monitoring system required for water-to-fuel ratio to meet NSPS; system must be accurate within ±5 percent.

(b) Monitor sulfur and nitrogen content of fuel.

Oil - (1): each occasion that fuel is transferred to bulk storage tank.

Gas - (2): daily monitoring required

3.4.2 FLORIDA RULES

The Florida DEP regulations for new stationary sources are covered in the F.A.C. The Florida DEP has adopted the EPA NSPS by reference in Rule 62-204.800(7); subsection (b)39 for stationary gas turbines. Therefore, the project is required to meet the same emissions, performance testing, monitoring, reporting, and record keeping as those described in Section 3.4.1. DEP has authority for implementing NSPS requirements in Florida.

3.4.3 FLORIDA AIR PERMITTING REQUIREMENTS

The Florida DEP regulations require any new source to obtain an air permit prior to construction. Major new sources must meet the appropriate PSD and nonattainment requirements as discussed previously. Required permits and approvals for air pollution sources include NSR for nonattainment areas, PSD, NSPS, National Emission Standards for Hazardous Air Pollutants (NESHAP), Permit to Construct, and Permit to Operate. The requirements for construction permits and approvals are contained in Rules 62-4.030, 62-4.050, 62-4.052, 62-4.210, and 62-210.300(1), F.A.C. Specific emission standards are set forth in Chapter 62-296, F.A.C.

3.4.4 HAZARDOUS POLLUTANT REVIEW

The Florida DEP has published guidelines (DEP, 1995) to determine whether any emission of a potentially hazardous or toxic pollutant can pose a possible health risk to the public. Maximum concentrations for all regulated pollutants for which an ambient standard does not exist and all nonregulated hazardous pollutants can be compared to ambient reference concentrations (ARCs) for each applicable pollutant. If the maximum predicted concentrations for any hazardous pollutant is less than the corresponding ARC for each applicable averaging time, that emission is considered not to pose a significant health risk. The ARCs are not environmental standards but, rather, evaluation tools to determine if an apparent threat to the public health may exist. These levels are not used in permitting new sources.

3.4.5 LOCAL AIR REGULATIONS

Lee County does not have specific regulations regarding ambient air quality or air pollutant emissions. The Lee County Comprehensive Plan identifies goals and objectives (Goal 88: Air Quality), which indicate that the county should maintain the best possible air quality, meet or be better than the ambient air quality standards, promote measures for preserving and improving current air quality, and maintain the present attainment status.

3.5 SOURCE APPLICABILITY

3.5.1 AREA CLASSIFICATION

The project site is located in Lee County, which has been designated by EPA and DEP as an attainment area for all criteria pollutants. Lee County and surrounding counties are designated as PSD Class II areas for SO_2, PM (TSP) , and NO_2. The nearest Class I area to the site is the Everglades National Park (NP) which is about 97.2 km (60.8 miles) from the site.

3.5.2 PSD REVIEW

3.5.2.1 Contemporaneous Emission Increases and Decreases

The proposed project is considered to be a modification of a major facility because the facility emissions exceed the PSD major threshold and that potential emissions from at least one regulated pollutant emitted by the new project is estimated to exceed the PSD significant emission rate. PSD review would be required for any pollutant for which the emissions of the proposed project and contemporaneous emission increases and decreases, exceed the PSD significant emission rates. As shown in Table 3-3, potential emissions from the proposed Project for NO_x, CO, PM (TSP), PM_{10}, SO_2, and sulfuric acid mist plus the actual net facility emission decreases of the Repowering Project, do not trigger PSD review. Because the proposed project's impacts for these pollutants are predicted to be below the significant impact levels, a modeling analysis incorporating the impacts from other sources is not required. [Note: EPA has promulgated changes to the PSD Rules to eliminate hazardous air pollutants (HAPs) from PSD review. The pollutants, vinyl chloride, mercury, asbestos, and beryllium, are no longer evaluated in PSD review.]

3.5.2.2 Emission Standards

The applicable NSPS for the CTs is 40 CFR Part 60, Subpart GG. The proposed emissions for the turbines will be well below the specified limits (see Section 4.0). There are no applicable NSPs for the dual fired fuel heaters.

3.5.2.3 Ambient Monitoring

Based on the estimated pollutant emissions from the proposed Project and contemporaneious emission decreases, a pre-construction ambient air quality monitoring analysis is not required for any regulated pollutant.

3.5.2.4 GEP Stack Height Impact Analysis

The GEP stack height regulations allow any stack to be at least 65 m [213 feet (ft)] high. The CT stacks for the project will be 80 ft. This stack height does not exceed the GEP stack height. However, as discussed in Section 6.0, Air Quality Modeling Approach, since the stack height is less than GEP, building downwash effects must be considered in the modeling analysis. As a result, the potential for downwash of the CTs' emissions caused by nearby structures are included in the modeling analysis.

3.5.3 NONATTAINMENT REVIEW

The project site is located in Lee County, which is classified as an attainment area for all criteria pollutants. Therefore, nonattainment requirements are not applicable.

3.5.4 OTHER CAA REQUIREMENTS

The 1990 CAA Amendments established a program to reduce potential precursors of acidic deposition. The Acid Rain Program was delineated in Title IV of the CAA Amendments and required EPA to develop the program. EPA's final regulations were promulgated on January 11, 1993, and included permit provisions (40 CFR Part 72), an allowance system (Part 73), CEM (Part 75), excess emission procedures (Part 77), and appeal procedures (Part 78).

EPA's Acid Rain Program applies to all existing and new utility units except those serving a generator less than 25 MW, existing simple cycle CTs, and certain non-utility facilities; units which fall under the program are referred to as affected units. The EPA regulations would be applicable to the proposed project for the purposes for obtaining a permit and allowances, as well as emission monitoring. New units are required to obtain permits under the program by submitting a complete application 24 months before the later of January 1, 2000, or the date on which the unit begins serving an electric generator (greater than 25 MW).

The permit would provide SO_2 and NO_x emission limitations and the requirement to hold emission allowances. Emission limitations established in the Acid Rain Program are presumed to be less stringent than BACT or lowest achievable emission rate (LAER) for new units. An allowance is a market-based financial instrument that is equivalent to 1 ton of SO_2 emissions. Allowances can be sold, purchased, or traded. For the proposed project, SO_2 allowances will be obtained from the market.

CEM for SO_2 and NO_x is required for gas-fired and oil-fired affected units. When an SO_2 CEM is selected to monitor SO_2 mass emissions, a flow monitor is also required. Alternately, SO_2 emissions may be determined using procedures established in Appendix D, 40 CFR Part 75 (flow proportional oil sampling or manual daily oil sampling). CO_2 emissions must also be determined either through a CEM (e.g., as a diluent for NO_x monitoring) or calculation. Alternate procedures, test methods, and quality assurance/quality control (QA/QC) procedures for CEM are specified (Part 75, Appendices A through I). The CEM requirements including QA/QC procedures are, in general, more stringent than those specified in the NSPS for Subpart GG. New units are required to meet the requirements by the later of January 1, 1995, or not later than 90 days after the unit commences commercial operation.

The EPA has, and is currently developing, emissions standards for HAPs for various industrial categories. These new National Emission Standards for Hazardous Air Pollutants (NESHAPs) that result from the 1990 CAA Amendments are based on the use of Maximum Achievable Control Technology (MACT). The adopted standards are contained in 40 CFR 63. New sources that emit more than 10 TPY of a single HAP or 25 TPY of total HAPs are required to apply MACT for the promulgated industrial category or to obtain a case-by-case MACT determination from the applicable regulatory authority after submitting a MACT analysis. EPA is currently developing NESHAP for stationary combustion turbines. The proposed NESHAP are anticipated in late 2000 with promulgation in early 2002. For the Project, emissions of HAPs will be less than 10 TPY of a single HAP and 25 TPY of all HAPs.

Table 3-1. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels

Pollutant	Averaging Time	AAQS ($\mu g/m^3$) Primary Standard	Secondary Standard	Florida	PSD Increments ($\mu g/m^3$) Class I	Class II	Significant Impact Levels ($\mu g/m^3$) [b]
Particulate Matter[c] (PM_{10})	Annual Arithmetic Mean	50	50	50	4	17	1
	24-Hour Maximum	150	150	150	8	30	5
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	1
	24-Hour Maximum[a]	365	NA	260	5	91	5
	3-Hour Maximum[a]	NA	1,300	1,300	25	512	25
Carbon Monoxide	8-Hour Maximum[a]	10,000	10,000	10,000	NA	NA	500
	1-Hour Maximum[a]	40,000	40,000	40,000	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	1
Ozone[c]	8-Hour Maximum[d]	157	157	157	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	1.5	NA	NA	NA

Note: Particulate matter (PM_{10}) = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
NA = Not applicable, i.e., no standard exists.

[a] Short-term maximum concentrations are not to be exceeded more than once per year.

[b] Maximum concentrations are not to be exceeded.

[c] On July 18, 1997, EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, $PM_{2.5}$ standards were introduced with a 24-hour standard of 65 g/m^3 (3-year average of 98th percentile) and an annual standard of 15 g/m^3 (3-year average at community monitors). These standards have been stayed by a court case against EPA; implementation of these standards appears to be years away.

[d] 0.08 parts per million (ppm); achieved when 3-year average of 99th percentile is 0.08 ppm or less. These have been stayed by a court case against EPA. EPA is appealing. The 1-hour standard of 0.12 ppm is still applicable. FDEP has not yet adopted the new standards.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978.; 40 CFR 50; 40 CFR 52.21.; Chapter 62-204, F.A.C.

Table 3-2. PSD Significant Emission Rates and *De Minimis* Monitoring Concentrations

Pollutant	Regulated Under	Significant Emission Rate (TPY)	*De Minimis* Monitoring Concentration[a] (μg/m3)
Sulfur Dioxide	NAAQS, NSPS	40	13, 24-hour
Particulate Matter [PM (TSP)]	NSPS	25	10, 24-hour
Particulate Matter (PM_{10})	NAAQS	15	10, 24-hour
Nitrogen Dioxide	NAAQS, NSPS	40	14, annual
Carbon Monoxide	NAAQS, NSPS	100	575, 8-hour
Volatile Organic Compounds (Ozone)	NAAQS, NSPS	40	100 TPY[b]
Lead	NAAQS	0.6	0.1, 3-month
Sulfuric Acid Mist	NSPS	7	NM
Total Fluorides	NSPS	3	0.25, 24-hour
Total Reduced Sulfur	NSPS	10	10, 1-hour
Reduced Sulfur Compounds	NSPS	10	10, 1-hour
Hydrogen Sulfide	NSPS	10	0.2, 1-hour
Mercury	NESHAP	0.1	0.25, 24-hour
MWC Organics	NSPS	3.5×10^{-6}	NM
MWC Metals	NSPS	15	NM
MWC Acid Gases	NSPS	40	NM
MSW Landfill Gases	NSPS	50	NM

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is below *de minimis* monitoring concentrations.

NAAQS = National Ambient Air Quality Standards
NM = No ambient measurement method established; therefore, no *de minimis* concentration has been established.
NSPS = New Source Performance Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
g/m^3 = micrograms per cubic meter
MWC = Municipal waste combustor
MSW = Municipal solid waste

[a] Short-term concentrations are not to be exceeded.
[b] No *de minimis* concentration; an increase in VOC emissions of 100 TPY or more will require monitoring analysis for ozone.
[c] Any emission rate of these pollutants.

Sources: 40 CFR 52.21.
Rule 62-212.400

Table 3-3. Net Emission Changes Due to the Proposed FPL Fort Myers Simple Cycle CT Project Compared to the PSD Significant Emission Rates

Pollutant	Pollutant Emissions (TPY) from Repowered Facility					
	Actual Emissions	Repowering Project	Simple Cycle CT Project[a]	Net Emissions Change	Significant Emission Rate	PSD Review
Sulfur Dioxide	20,561	137	91	-20,333	40	No
Particulate Matter [PM(TSP)]	607	313	91	-203	25	No
Particulate Matter (PM_{10})	607	290	91	-225	15	No
Nitrogen Dioxide	7,095	1,845	741	-4,509	40	No
Carbon Monoxide	1,507	1,267	280	40	100	No
Volatile Organic Compounds	46.7	82.2	26	62	40	Yes
Lead	0.05	NEG	NEG	NEG	0.6	No
Sulfuric Acid Mist	915	20.7	--	-894	7	No
Total Fluorides	58	NEG	NEG	-58	3	No
Total Reduced Sulfur	NEG	NEG	NEG	–	10	No
Reduced Sulfur Compounds	NEG	NEG	NEG	–	10	No
Hydrogen Sulfide	NEG	NEG	NEG	–	10	No
Mercury	0.021	<0.0001	<0.0001	-0.021	0.1	No
MWC Organics (as 2,3,7,8-TCDD)	$8.7x10^{-8}$	$5.9x10^{-8}$	NEG	$-2.8x10^{-8}$	$3.5x10^{-6}$	No
MWC Metals (as Be and Cd)	0.0513	NEG	NEG	-0.0153	15	No
MWC Acid Gases (as HCl)	25.1	NEG	NEG	-25.1	40	No

Note: NEG = Negligible; MWC= Municipal Waste Combustor

[a] Based on emissions when operating at base load at 59°F; firing natural gas for 7,760 hours per year, firing oil for 500 hours per year, and operating at HPM for 500 hours per year. Total of 2 GE FRAME F CTs.

Table 3-4. Predicted Net Increase in Impacts Due to the Proposed Fort Myers Simple Cycle CT Project Compared to PSD *De Minimis* Monitoring Concentrations

	Concentration ($\mu g/m^3$)	
Pollutant[a]	Predicted Increase in Impacts[b]	*De Minimis* Monitoring Concentration; Averaging Period
Volatile Organic Compounds (VOCs)	26 TPY	100 TPY
Sulfur Dioxide	0.68	13; 24-hour
Particulate Matter (PM_{10})	0.15	10; 24-hour
Nitrogen Dioxide	0.16	14; annual
Carbon Monoxide	1.5	575; 8-hour

Note: NA = not applicable.
NM = no ambient measurement method.
TPY = tons per year.

[a] The only pollutant triggering PSD review is VOCs. The impacts of SO_2, PM_{10}, NO_2, and CO are shown for informational purposes.
[b] See Section 6.0 for air dispersion modeling results.

4.0 CONTROL TECHNOLOGY DESCRIPTION

4.1 NITROGEN OXIDES

The CT proposed for the project will utilize advanced dry low-NO_x combustors at an emission rate of 10.5 ppmvd corrected to 15 percent O_2 for natural gas firing. Water injection is proposed for fuel oil firing at an emission rate of 42 ppmvd corrected to 15-percent O_2.

Dry low-NO_x combustor technology has been offered and installed by manufacturers to reduce NO_x emissions by inhibiting thermal NO_x formation through premixing fuel and air prior to combustion and providing staged combustion to reduce flame temperatures. NO_x emission rates of 25 ppmvd (corrected to 15 percent O_2) and less have been offered by manufacturers for advanced combustion turbines. Advanced in this context is the larger (over 150 MW) and more efficient (higher initial firing temperatures and lower heat rate) combustion turbines. This technology is truly pollution prevention since NO_x emissions are inhibited from forming.

The permitting trend for advanced (i.e., Frame "F" class) simple cycle combustion turbines is the use of dry low-NO_x combustors. At least five projects in Florida (Florida Power & Light Martin Peaking Units; Oleander Power Project; IPS Shady Hills and Vandolah Projects, and Osceola Power Project) have been permitted using this technology.

This type of machine advances the state-of-the-art for CTs by being more efficient and less polluting than previous CTs. Integral to the machine's design is dry low-NO_x combustors that prevent the formation of air pollutants within the combustion process, thereby eliminating the need for add-on controls that can have detrimental effects on the environment. An analogy of this technology is a more efficient automotive engine that gives better mileage and reduces pollutant formation without the need of a catalytic converter.

An advanced gas turbine is unique from an engineering perspective in two ways. First, the advanced machine is larger and has higher initial firing (i.e., combustion) temperatures than conventional turbines. This results in a larger, more thermally efficient machine. For example, the electrical generating capability of the selected Class F advanced machine is about 170 MW compared to 70 to 120 MW for conventional machines. The higher initial firing temperature (i.e., 2,400°F) results in about 10 percent more electrical energy produced for the same amount of fossil fuel used in conventional machines. This has the added advantage of producing lower air pollutant emissions (e.g., NO_x, PM, and CO) for each MW generated. While the increased firing temperature increases the thermal NO_x generated, this NO_x increase is controlled through combustor design.

The second unique attribute of the advanced machine is the use of dry low-NO_x combustors that will reduce NO_x emissions to 9 ppmvd corrected to 15 percent O_2. Thermal NO_x formation is inhibited by using staged combustion techniques where the natural gas and combustion air are premixed prior to ignition. This level of control will result in NO_x emissions of about 0.03 lb/10^6 Btu, which is significantly less than the emission rate from the existing fossil-fuel-fired steam generators.

The GE Frame 7FA will be equipped with the GE dry low-NO_x 2.6 (DLN-2.6) combustion system that regulates the distribution of fuel delivery to a multi-nozzle, total premix combustor arrangement. The fuel flow distribution to each combustion system fuel nozzle is regulated to maintain unit load and optimum turbine emissions. The DLN-2.6 combustion system consists of six fuel nozzles per combustion can, with each operating as a fully premixed combustor. Of the six nozzles, five are located radially and one is in the center. The fuel system is fully automated and sequences the DLN-2.6 combustion system through a number of staging modes prior to reaching full load. The GE Frame 7FA has 14 combustors per turbine. GE has guaranteed 9 ppmvd corrected to 15 percent oxygen for the Fort Myers Project. Similar systems have been field tested at or below 9 ppmvd corrected to 15 percent O_2. An emission limit of 9 ppmvd corrected to 15 percent O_2 on a 30-day rolling average basis is being requested. This provides some margin for operation in future years while still providing considerable reduction in NO_x emissions from the facility.

4.2 CARBON MONOXIDE

Emissions of CO are dependent upon the combustion design, which is a result of the manufacturer's operating specifications, including the air-to-fuel ratio, staging of combustion and the amount of water injected (i.e., for oil firing). The CTs proposed for the project have designs to optimize combustion efficiency and minimize CO as well as NO_x emissions. The emissions limit proposed for CO is 9 ppmvd for natural gas firing and 20 ppmvd for fuel oil firing, which is within the range of limits established as BACT for other projects. FDEP approved an emission limits up to 25 ppmvd for the simple cycle projects. GE has guaranteed for base load operation 9 ppmvd and 20 ppmvd for natural gas and fuel oil firing, respectively, for the Fort Myers Project. The requested limit provides additional margin while still reducing CO emissions from the facility.

4.3 VOLATILE ORGANIC COMPOUNDS-BACT

VOCs will be emitted by the CT as a result of incomplete combustion. Emissions of VOCs will be limited by the use of combustion technology and clean fuels so that emissions will not exceed 1.5 ppmvd with natural gas firing and 3.5 ppmvw for fuel oil firing. These emission levels have been established as BACT emission levels established for other similar sources. Combustion controls and the use of clean fuels have been overwhelmingly approved as BACT for CTs. The environmental effect of further reducing emissions would not be significant.

Good combustion practices and combustion design, and catalytic oxidation are the control alternatives viable for the project. Combustion design and good combustion practices are the common techniques used to control VOC emissions. Sufficient time turbulence, temperature, and turbulence is required within the combustion zone to maximize combustion efficiency and minimize VOC emissions.

In an oxidation catalyst control system, VOC emissions are reduced by allowing unburned VOC to react with oxygen at the surface of a precious metal catalyst, such as platinum. Combustion of VOC starts at about 300°F with efficiencies of approximately 40 percent occurring at temperatures above 600°F according to catalyst manufacturer Englehard.

For combustion turbines, the oxidation catalyst can be located directly after the CT. Catalyst size depends upon the exhaust flow, temperature, and desired efficiency. The existing oxidation catalyst applications primarily have been limited to smaller cogeneration facilities burning natural gas. Oxidation catalyst have not been used on oil fired CTs. The use of sulfur-containing fuels in an oxidation catalyst system would result in an increase of SO_3 emissions and concomitant corrosive effects of the stack. In addition, trace metals in the fuel could result in catalyst poisoning during prolonged periods of operation.

Since the units may likely require numerous startups, during simple-cycle operation, variations in exhaust conditions will influence catalyst life and performance. Very little technical data exist to demonstrate the effect of such cycling.

4.3.1.1 Economic

Table 4-1 and 4-2 present the capital and annualized cost for an oxidation catalyst applied to simple cycle operation. The estimated annualized cost of an oxidation catalyst is $703,400 per unit, resulting in a cost effectiveness of nearly $133,800 per ton of VOC removed for a control efficiency of 40 percent. Indeed, even if an unrealistic 90 percent control of VOCs is assumed the resulting cost effectiveness is nearly $60,000 per ton of VOC removed. The cost effectiveness is based on 7,760 hours per year firing natural gas at base load, 500 hours per year firing natural gas at high power mode, and 500 hours per year firing distillate oil. No cost are associated with good combustion practices or combustion techniques since they are inherent in the design.

4.3.1.2 Environmental

Experience with similar projects indicate that the air quality impacts of both oxidation catalyst control and good combustion practice would be well below any significant impact levels. Therefore, no significant environmental benefit would be realized by the installation of an oxidation catalyst. Indeed there would be additional particulate and secondary emissions as a result of an oxidation catalyst. The particulate would result from the conversion of SO_2 to sulfates, and the secondary emissions would result from the heat rate reduction.

4.3.1.3 Energy

An energy penalty would result from the pressure drop across the catalyst bed. A pressure drop of about 2 inches water gauge would be expected. At a catalyst back pressure of about two inches, an energy penalty of about 3,150,096 kWhr/year would result at 100 percent load. The energy penalty is sufficient to supply the electrical needs of about 260 residential customers. To replace this lost energy, about 3.1×10^{10} or about 31 mmcf/year of natural gas would be required.

4.3.1.4 Proposed BACT

Combustion design and good combustion practices are proposed as BACT, as there are adverse technical and economic consequences of using catalytic oxidation on CTs. The proposed BACT emission rates for VOC will not exceed 1.5 ppmvw when firing natural gas and 3.5 ppmvw when firing distillate oil at baseload conditions. Catalytic oxidation is considered unreasonable for the following reasons:

1. Catalytic oxidation will not produce measurable improvement in air quality.
2. The economic impact are significant (i.e., the capital cost is about 1.62 million per unit, with an annualized cost of $703,400 per year per unit.); and
3. Recent projects in Florida have been authorized with BACT emission limits of 1.5 ppmvw and 3.5 ppmvw for natural gas and oil firing respectively.

Combustion design is proposed as BACT as a result of the technical and economic consequences of using catalytic oxidation of CTs. Catalytic oxidation is considered unreasonable since it will not produce a measurable reduction in air quality impacts. The cost of an oxidation catalyst would be significant and not be cost effective given the maximum proposed emission limits.

4.4 PM/PM_{10}, SO_2, AND OTHER REGULATED AND NONREGULATED POLLUTANT EMISSIONS

The PM/PM_{10} emissions from the CTs are a result of incomplete combustion and trace elements in the fuel. The design of the CT ensures that particulate emissions will be minimized by combustion controls and the use of natural gas.

4.5 PROPOSED EMISSION LIMITS

Table 4-3 presents a summary of the emission limits proposed for the project including averaging times and compliance methods.

Table 4-1. Direct and Indirect Capital Costs for CO Catalyst, General Electric Frame F Simple Cycle

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
CO Associated Equipment	$780,000	Vendor Quote
Flue Gas Ductwork	$49,088	Vatavauk,1990
Instrumentation	$78,000	10% of CO Associated Equipment
Sales Tax	$46,800	6% of CO Associated Equipment/Catalyst
Freight	$39,000	5% of CO Associated Equipment/Catalyst
Total Direct Capital Costs (TDCC)	$992,888	
Direct Installation Costs		
Foundation and supports	$79,431	8% of TDCC and RCC;OAQPS Cost Control Manual
Handling & Erection	$139,004	14% of TDCC and RCC;OAQPS Cost Control Manual
Electrical	$39,716	4% of TDCC and RCC;OAQPS Cost Control Manual
Piping	$19,858	2% of TDCC and RCC;OAQPS Cost Control Manual
Insulation for ductwork	$9,929	1% of TDCC and RCC;OAQPS Cost Control Manual
Painting	$9,929	1% of TDCC and RCC;OAQPS Cost Control Manual
Site Preparation	$5,000	Engineering Estimate
Buildings	$0	
Total Direct Installation Costs (TDIC)	$302,866	
Total Capital Costs	$1,295,754	Sum of TDCC, TDIC and RCC
Indirect Costs		
Engineering	$99,289	10% of Total Capital Costs; OAQPS Cost Control Manual
Construction and Field Expense	$49,644	5% of Total Capital Costs; OAQPS Cost Control Manual
Contractor Fees	$99,289	10% of Total Capital Costs; OAQPS Cost Control Manual
Start-up	$19,858	2% of Total Capital Costs; OAQPS Cost Control Manual
Performance Tests	$9,929	1% of Total Capital Costs; OAQPS Cost Control Manual
Contingencies	$29,787	3% of Total Capital Costs; OAQPS Cost Control Manual
Total Indirect Capital Cost (TInDC)	$307,795	
Total Direct, Indirect and Capital Costs (TDICC)	$1,603,549	Sum of TCC and TInCC

Mass Flow of Combustion Turbine	3,600,000 lb/hr	"F"

Table 4-2. Annualized Cost for VOC Catalyst, General Electric Frame F Simple Cycle Mode

Cost Component	Cost	Basis of Cost Estimate
Diirect Annual Costs		
Operating Personnel	$6,240	8 hours/week at $15/hr
Supervision	$936	15% of Operating Personnel;OAQPS Cost Control Manual
Catalyst Replacement	$224,667	3 year catalyst life; base on Vendor Budget Quote
Inventory Cost	$28,548	Capital Recovery (10.98%) for 1/3 catalyst
Contingency	$7,812	3% of Direct Annual Costs
Total Direct Annual Costs (TDAC)	268,202	
Energy Costs		
Heat Rate Penalty	$222,767	0.2% of MW output; EPA, 1993 (Page 6-20) and $3/mmBtu addl fuel costs
Total Energy Costs (TDEC)	$222,767	
Indirect Annual Costs		
Overhead	$4,306	60% of Operating/Supervision Labor
Property Taxes	$16,035	1% of Total Capital Costs
Insurance	$16,035	1% of Total Capital Costs
Annualized Total Direct Capital	$176,070	10.98% Capital Recy Factor of 7% over 15 yrs times sum of TDICC
Total Indirect Annual Costs	$212,446	
Total Annualized Costs	$703,416	Sum of TDAC, TEC and TIAC
Cost Effectiveness	$133,844	VOC Emission Reduction ($/ton of VOC removed)

Table 4-3. Proposed Emission Limits for the CTs Associated with the Fort Myers Repowering Project

Pollutant	Proposed Limit (Natural Gas)	Proposed Limit (Fuel Oil)	Averaging Time	Compliance Method
Nitrogen Oxides	10.5 ppmvd[a]	42 ppmvd[a]	30-day rolling average	Part 75 CEM
Carbon Monoxide	9 ppmvd	20 ppmvd	Initial compliance test	EPA Method 10
Sulfur Dioxide	1 grain per 100 scf	0.05 percent[b]	Annual Average	Supplier analyses
Volatile Organic Compounds	1.5 ppmvd	3.5 ppmvw	Initial compliance test	EPA Method 25A
Particulate Matter	10 percent opacity or less	10-percent opacity or less	6-minute average	EPA Method 9

Note: ppmvd = parts per million (volume), dry

a Corrected to 15-percent O_2

b Percent sulfur in fuel oil

5.0 AMBIENT MONITORING DATA

The Fort Myers Plant is located in a rural area of Lee County which has a minimal number of air pollution sources. A number of air monitoring stations have operated in the county over the past several years to measure air concentrations from existing sources. A summary of the maximum pollutant concentrations measured in Lee County and used in the evaluation of the Fort Myers Repowering Project is presented in Table 5-1. The monitoring locations are presented in Figure 5-1. These data indicate that the maximum PM_{10} and O_3 concentrations measured in the county are well below applicable standards.

Recent measurements through July 1998 also show that the maximum O_3 concentrations are below the AAQS. The highest and second-highest 1-hour average O_3 concentrations at the Cape Coral monitoring site were 0.117 and 0.109 ppm, respectively. At the Fort Myers Beach site (intersection of School and Bay Streets), the highest and second-highest 1-hour O_3 concentrations were 0.103 and 0.102 ppm, respectively.

In addition to the monitors in Lee County, FDEP operates a PM_{10} ambient monitor in Naples, Collier County, about 48 km (30 miles) to south of the plant site. The maximum concentrations from this monitoring station are well below the applicable ambient standards. No other FDEP-operated ambient air monitoring stations are located in adjacent counties.

Given the lack of industrial development in the vicinity of the plant, existing concentrations of other criteria pollutants, i.e., SO_2, NO_2, CO, and Pb, which are usually associated with an urban environment, are expected to be well below the AAQS.

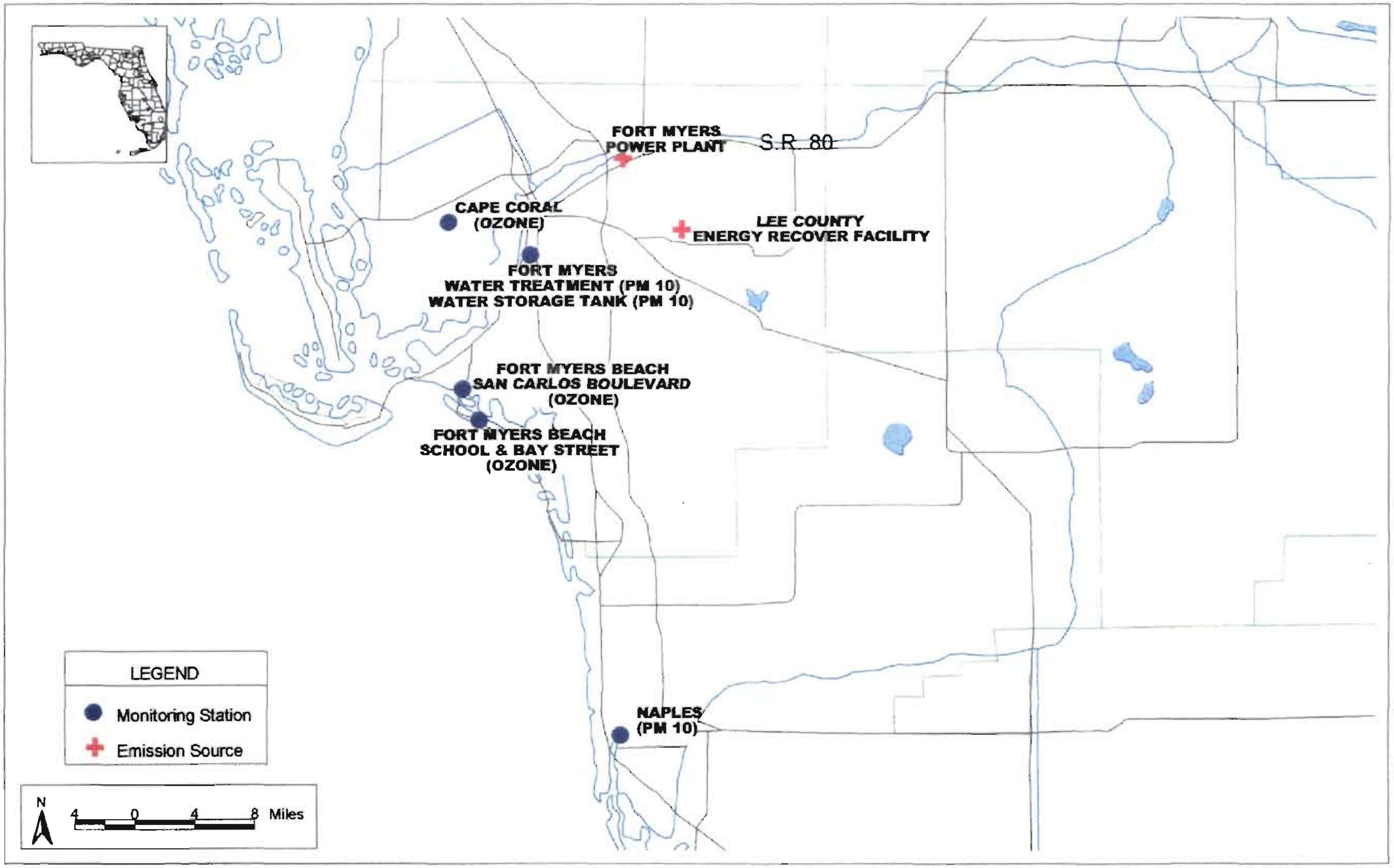
Table 5-1. Summary of Maximum PM_{10} and O_3 Concentrations Measured in Lee and Collier Counties, 1994 to 1997

Saroad Site No.	Operator	Location [a]	Measurement Period: Year	Measurement Period: Months	Number of Observations	Concentration (ppm) 1-Hour: Highest	Concentration (ppm) 1-Hour: Second-Highest	Concentration ($\mu g/m^3$) 24-Hour: Highest	Concentration ($\mu g/m^3$) 24-Hour: Second-Highest	Concentration ($\mu g/m^3$) Period: Average
PM_{10}										
		Florida AAQS				**NA**	**NA**	**NA**	**150**	**50**
Lee County										
1300-005-F01	FDEP	Fort Myers/ Water Treatment Plant	1994	Oct-Dec	11	NA	NA	22	22	13
			1995	Jan-Dec	59	NA	NA	59	30	16
			1996	Jan-Dec	57	NA	NA	65	38	17
			1997	Jan-Dec	58	NA	NA	38	33	18
1300-005-F09	FDEP	Fort Myers/ Water Storage Tank	1994	Nov-Dec	9	NA	NA	23	17	12
			1995	Apr-Dec	60	NA	NA	59	29	16
			1996	Jan-Dec	50	NA	NA	65	38	17
			1997	Jan-Dec	53	NA	NA	38	33	17
Collier County										
1300-005-F09	FDEP	Naples/ East Naples, Fire Dept.	1995	Jan-Dec	59	NA	NA	65	34	16
			1996	Jan-Dec	56	NA	NA	60	45	16
			1997	Jan-Dec	58	NA	NA	46	37	18
Ozone										
		Florida AAQS				**NA**	**0.12**	**NA**	**NA**	**NA**
Lee County										
0475-001-F01	FDEP	Cape Coral/ 1111 SE Sixth Court	1994	Jan-Dec	8,592	0.093	0.092	NA	NA	NA
			1995	Jan-Dec	8,544	0.092	0.086	NA	NA	NA
			1996	Jan-Dec	8,448	0.074	0.072	NA	NA	NA
			1997	Jan-Dec	8,533	0.081	0.076	NA	NA	NA
1304-001-F01	FDEP	Fort Myers Beach/ 17891 San Carlos Boulevard	1994	Jan-Dec	8,480	0.092	0.090	NA	NA	NA
			1995	Jan-Dec	6,986	0.089	0.088	NA	NA	NA
1304-002-F01	FDEP	Fort Myers Beach/ Intersection of School and Bay	1995	Oct-Dec	1,433	0.066	0.065	NA	NA	NA
			1996	Jan-Dec	8,636	0.089	0.080	NA	NA	NA
			1997	Jan-Dec	8,655	0.098	0.083	NA	NA	NA

Note: NA = not applicable.
AAQS = ambient air quality standard.

[a] See Figure 5-1 for station locations

Golder Associates



FORT MYERS REPOWERING PROJECT

Figure 5-1
Location of Ambient Air Quality Monitoring Stations and Air Emission Sources

FPL

6.0 AIR QUALITY IMPACT ANALYSIS

6.1 GENERAL MODELING ANALYSIS APPROACH

The general modeling approach followed EPA and FDEP modeling guidelines for determining compliance with the AAQS and PSD increments. For this project, the net emissions changes will be less than the PSD significant emission rates. As a result, an air quality impact analysis is not required by FDEP new source review air regulations. However, as a supplement to the air permit application, air quality impacts were estimated for the future plant configuration. This includes the impacts due to the proposed CTs, the repowered units (6 combined-cycle CTs), 12 existing gas turbines, and the cooling tower in the vicinity of the FPL Fort Myers plant site following FDEP policies. As total PSD increment consumption was addressed in detail for the repowering project, compliance with allowable PSD increments is not addressed in this report.

A significant impact analysis was performed to determine whether the proposed CT's alone will result in predicted impacts that will exceed the EPA significant impact levels at any off-plant property areas in the vicinity of the plant.

Generally, if a new project also is within 150 km of a PSD Class I area, then a significant impact analysis is also performed for the PSD Class I area. EPA has proposed PSD Class I significant impact levels that have not been finalized as of this report. Because the FPL Fort Myers site is approximately 95 km from the Everglades National Park PSD Class I area, an assessment of the proposed CTs was performed at this area.

An air quality impact assessment was performed for the power plant's future operations. The worst case future emission scenario will include the proposed two simple-cycle CTs firing fuel oil, the 6 repowered units in combined-cycle mode (these units only fire natural gas), the repowered project cooling tower, and the existing GTs. For these operations, the buildings for Units 1 and 2 would no longer be in existence.

6.2 PRECONSTRUCTION MONITORING ANALYSIS APPROACH

A proposed major stationary facility or major modification may be exempt from the monitoring requirements with respect to a particular pollutant if the emissions increase of the pollutant from the facility or modification would cause, in any area, air quality impacts (or in the case of VOCs, emission) less than the *de minimis* levels. As presented in Section 3.0, since the project's VOC emissions are lower than the *de minimis* VOC emission level, the project is exempt from preconstruction ambient monitoring requirements.

6.3 AIR MODELING ANALYSIS APPROACH

6.3.1 GENERAL PROCEDURES

As stated in the previous sections, for each pollutant which is emitted above the significant emission rate, air modeling analyses are required to determine if the project's impacts are predicted to be greater than the significant impact levels. These analyses consider the project's impacts alone. Air quality impacts are predicted using 5 years of meteorological data and selecting the highest annual and the highest short-term concentrations for comparison to the significant impact levels.

If the project's impacts are greater than the significant impact levels, the air modeling analyses must consider other nearby sources and background concentrations, and calculate the cumulative impact of these sources for comparison to ambient standards. In general, when 5 years of meteorological data are used in the analysis, the highest annual and the HSH concentrations are compared to the applicable AAQS and allowable PSD increments. The HSH concentration is calculated for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor,
2. Identifying the second-highest concentration at each receptor, and
3. Selecting the highest concentration among these second-highest concentrations.

This approach is consistent with air quality standards and allowable PSD increments, which permit a short-term average concentration to be exceeded once per year at each receptor.

To develop the maximum short-term concentrations for the proposed project, the modeling approach was divided into screening and refined phases to reduce the computation time required to perform the modeling analysis. For this study, the only difference between the two modeling phases is the density of the receptor grid spacing employed when predicting concentrations. Concentrations are predicted for the screening phase using a coarse receptor grid and a 5-year meteorological data record.

Refinements of the maximum predicted concentrations are typically performed for the receptors of the screening receptor grid at which the highest and/or HSH concentrations occurred over the 5-year period. Generally, if the maximum concentration from other years in the screening analysis are within 10 percent of the overall maximum concentration, then those other concentrations are refined as well. Typically, if the highest and HSH concentrations are in different locations, concentrations in both areas are refined.

Modeling refinements are performed for short-term averaging times by using a denser receptor grid, centered on the screening receptor at which the maximum concentration was predicted. The angular spacing between radials is reduced from 0.25 to 2 degrees, so that the angular spacing between adjacent receptor is 100 m or less. Also, the radial distance interval between receptors is 100 m. If the maximum screening concentration is located on the plant property boundary, additional plant boundary receptors are input, spaced at a 2-degree angular interval and centered on the screening receptor. The domain of the refinement grid will extend to all adjacent screening receptors. The air dispersion model is then executed with the refined grid for the entire year of meteorology during which the screening concentration occurred. This approach is used to ensure that a valid highest concentration is obtained. A more detailed description of the model, along with the emission inventory, meteorological data, and screening receptor grids are presented in the following sections.

6.3.2 MODEL SELECTION

The Industrial Source Complex Short-term (ISCST3, Version 00101) dispersion model (EPA, 1999) was used to evaluate the pollutant impacts due to the proposed CTs. This model is maintained by the EPA on its Internet website: Support Center for Regulatory Air Models

(SCRAM), within the Technical Transfer Network (TTN). A listing of ISCST3 model features is presented in Table 6-1. The ISCST3 model is designed to calculate hourly concentrations based on hourly meteorological data (i.e., wind direction, wind speed, atmospheric stability, ambient temperature, and mixing heights). The ISCST3 model is applicable to sources located in either flat or rolling terrain where terrain heights do not exceed stack heights. These areas are referred to as simple terrain. The model can also be applied in areas where the terrain exceeds the stack heights. These areas are referred to as complex terrain.

In this analysis, the EPA regulatory default options were used to predict all maximum impacts. The ISCST3 model can run in the rural or urban land use mode which affects stability dispersion coefficients, wind speed profiles, and mixing heights. Land use can be characterized based on a scheme recommended by EPA (Auer, 1978). If more than 50 percent of the land use within a 3-km radius around a project is classified as industrial or commercial, or high-density residential, then the urban option should be selected. Otherwise, the rural option is appropriate. Based on the land-use within a 3-km radius of the FPL Fort Myers plant site (see Figure 2-1), the rural dispersion coefficients were used in the modeling analysis.

The ISCST3 model was used to provide maximum concentrations for the annual and 24-, 8-, 3-, and 1-hour averaging times. When evaluating the project's impacts only for comparison to the significant impact and *de minimis* monitoring levels, a generic emission rate of 10 grams per second (g/s) was used as emissions for the proposed source. Maximum pollutant-specific air impacts for the project were then determined by multiplying the maximum pollutant-specific emission rate, in pounds per hour, by the maximum predicted generic impact divided by 79.365 lb/hr (10 g/s).

6.3.3 METEOROLOGICAL DATA

Meteorological data used in the ISCST3 model to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the FAA station located at the Fort Myers Page Field Airport and the NWS station located in Ruskin, respectively. Concentrations were predicted using 5 years of hourly meteorological data from 1987 through 1991. The FAA station at Fort Myers is located approximately 19 km (12 miles) to the southwest of the plant site. The NWS station at Ruskin is located approximately 140 km (85 miles) to the north of the plant site. The surface meteorological data from Fort Myers are assumed to be representative of the project site because both the project site and the weather station are located near one another and are situated near similar topographical features and land use characteristics.

The FDEP has recommended and approved the use of these meteorological data to address air quality impacts for proposed sources locating in Lee County.

The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling height. The wind speed, cloud cover, and cloud ceiling values were used in the ISCST3 meteorological preprocessor program to determine atmospheric stability using the Turner stability scheme. Based on the temperature measurements at morning and afternoon, mixing heights were calculated from the radiosonde data at Ruskin using the Holzworth approach (Holzworth, 1972). Hourly mixing heights were derived from the morning and afternoon mixing heights using the interpolation method developed by EPA (Holzworth, 1972). The hourly surface data and mixing heights were used to develop a sequential series of hourly meteorological data (i.e., wind direction, wind speed, temperature, stability, and mixing heights). Because the observed hourly wind directions at the NWS stations are classified into one of thirty-six 10-degree sectors, the wind directions were randomized within each sector to account for the expected variability in air flow. These calculations were performed using the EPA RAMMET meteorological preprocessor program.

6.3.4 EMISSION INVENTORY

6.3.4.1 Proposed Units

A summary of the criteria pollutant emission rates, physical stack and stack operating parameters for the proposed CTs used in the air modeling analysis is presented in Tables 2-1 through 2-6. The emission and stack operating parameters presented for 35°F, 59°F, and 95°F ambient temperatures for both natural gas and distillate fuel oil were used in the modeling to determine the maximum air quality impacts for a range of possible operating conditions.

The following nine modeling scenarios were considered for each fuel type:

1. Base operating load at an inlet temperature of 35°F;
2. Base operating load at an inlet temperature of 59°F;
3. Base operating load at an inlet temperature of 95°F;
4. 75 percent operating load at an inlet temperature of 35°F;
5. Base operating load at an inlet temperature of 59°F;
6. 75 percent operating load at an inlet temperature of 95°F;
7. 50 percent operating load at an inlet temperature of 35°F; and
8. Base operating load at an inlet temperature of 59°F;
9. 50 percent operating load at an inlet temperature of 95°F.

In addition, the following three modeling scenarios were also considered for natural gas firing only, making a total of 12 scenarios for natural gas firing;

1. Higher Power Mode (HPM), base inlet temperature of 35°F ;
2. HPM, base inlet temperature of 59°F; and
3. HPM, base inlet temperature of 95°F.

The proposed CTs will have a stack height of 80 ft and an inner stack diameter of 20.5 ft. To address impacts for the proposed CTs alone and determine the operating load and ambient temperature that produce the maximum air quality impact, a generic emission rate of 10 grams per second (g/s) was used as an emission rate for the proposed CTs. Maximum pollutant-specific air impacts were determined by multiplying the maximum pollutant-specific emission rate in pounds per hour (lb/hr) to the maximum predicted generic impact divided by 79.365 lb/hr (10 g/s).

6.3.4.2 Existing Site Facilities

The repowered units will consist of 6 CTs operating in combined-cycle mode. Each unit will have a HRSG stack with a height of 125 ft and an inner stack diameter of 19 ft. The repowered units operate burn only natural gas.

The cooling tower dimensions are as follows: deck height of 31 ft, length of 580 ft, and width of 50 ft. The cooling tower will consist of 12 cells; each cell will have a height of 45 ft and a diameter of 32 ft.

Existing gas turbines, GT1-GT12, will continue to operate on fuel oil.

6.3.4.3 Other Emission Sources

The only air emission source, other than the existing GTs at the Fort Myers Plant, that could potentially interact with the proposed project is the Lee County Energy Recovery Facility, located about 8 km to the south of the Fort Myers Plant. The stack, operating, and pollutant emission data for the Lee County Energy Recovery Facility are as follows:

Stack Data		Emission Data	
Height	276 ft	SO_2	82 lb/hr
Diameter	6.5 ft	NO_2	160 lb/hr
		PM	40 lb/hr
Operating Data			
Exit gas temperature	290°F		
Exit gas velocity	75.3 ft/s		

6.3.5 RECEPTOR LOCATIONS

For predicting maximum concentrations in the vicinity of the plant due to the proposed project only, a polar receptor grid comprised of 847 discrete and regular grid receptors was used. These receptors included 36 receptors located on radials extending out from the modeling origin. Along each radial, receptors were located at the plant property and at distances of 0.3, 0.5, 0.7, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0, 18.0, 20.0, 22.0, 24.0, 27.0, and 30.0 km from the modeling origin. The modeling origin location is the midpoint between the No. 3 and No. 4 HRSG stack locations. This is the same location that was used in the 1998 SCA air modeling analysis.

For predicting maximum concentrations for comparison to the AAQS, a receptor grid comprised of 883 discrete and regular grid receptors was used. These receptors included 36 receptors located on radials extending out from the modeling origin. Along each radial, receptors were located at the plant property and at distances of 0.3, 0.5, 0.7, 0.9, 1.1, 1.5, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, and 20.0 km from the origin location.

Because the maximum pollutant impacts due to the proposed CTs only are generally an order of magnitude or more below the significant impact levels, additional air modeling refinements were not performed for the project only impacts in the site vicinity. However, modeling refinements were performed for the AAQS analyses, which included all future FPL Fort Myers sources.

Since the terrain surrounding the proposed plant site varies little from the stack base elevation of 50 ft above MSL, the terrain was assumed to be flat and receptor elevations were set equal to the stack base elevation.

6.3.6 BUILDING DOWNWASH EFFECTS

The only significant structures in the vicinity of the proposed CT stacks are the proposed CT air filter inlets and the CT structures. The height and widths of these structures are as follows:

Structure	Height (ft)	Width (ft)	Length (ft)
CT air inlet	55	20	48
CT structure	22	30	36

The following additional structures were included from the HRSG operation analysis presented in the air application for the Repowering Project:

Structure	Height (ft)	Width (ft)	Length (ft)
CT air inlet	55	20	48
HRSG structure	52	40	68
Diesel fuel oil tank	40	180 (diameter)	NA
Cooling tower	28.5	529	45

Note that for future plant operations, the buildings associated with retired Units 1 and 2 will no longer exist.

Building dimensions for the project's structures were entered into the EPA's Building Profile Input Program (BPIP, Version 95086) for the purpose of obtaining direction-specific building heights and widths for all downwash-affected sources. The direction-specific building dimensions were then input to the ISCST3 model as the building height and width for each of 36 ten-degree wind sectors. A summary of the direction-specific building dimensions used in the modeling is presented in Appendix C.

6.3.7 BACKGROUND CONCENTRATIONS

Total air quality impacts were estimated by adding the maximum concentrations due to project-related sources to background concentrations. Background concentrations are concentrations due to sources not associated with the Fort Myers Plant. These concentrations consist of two components:

- Impacts due to other modeled emission sources (i.e., non-project-related), and
- Impacts due to sources not explicitly modeled.

Background concentrations due to other modeled sources were predicted with the ISCST model based on the data developed from the emission inventory in Section 6.1.5.

The non-modeled background concentrations were obtained from air quality monitoring data and are as follows:

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)
PM_{10}	24-hour	33
	Annual	18
SO_2	3-hour	100
	24-hour	31
	Annual	5
NO_2	Annual	20

Background PM_{10} concentrations were based on the highest annual and second-highest 24-hour average concentrations measured in Lee County and used in the air quality analysis for the Fort Myers Repowering Project (see Section 5.0). Background SO_2 concentrations were based on the highest annual, second-highest 24-hour, and second-highest 3-hour average concentrations measured in Sarasota County during 1997 (which is the closest SO_2 monitoring station to the plant site). Similarly, background NO_2 concentrations were based on the highest annual concentration measured at the NO_2 monitoring stations closest to the plant site. These monitoring stations are located in Pinellas, Hillsborough, and Orange County. The SO_2 and NO_2 background concentrations are conservative since they are based on air quality data collected in areas with higher vehicular and industrial emissions which would produce higher contributions from non-modeled background sources than those expected around the Fort Myers plant site.

6.4 SIGNIFICANT IMPACT ANALYSIS RESULTS

6.4.1 SITE VICINITY

The modeling analysis results for the proposed CTs alone in the vicinity of the plant are summarized in Tables 6-2 through 6-6. The maximum pollutant concentrations predicted in the screening analysis for a single CT and two CTs firing natural gas are presented in Tables 6-2 and 6-3, respectively. Similarly, the maximum pollutant concentrations predicted for one and two CTs firing distillate fuel are presented in Tables 6-4 and 6-5, respectively.

As shown in the tables, the maximum predicted PM, SO_2, NO_x, and CO impacts due to the proposed CTs are all well below the significant impact levels. Because of the very low impacts, further refinements of the project only impacts were not performed. These occurred during fuel oil firing. A summary of the project only impacts is compared to the significant impact levels in Table 6-6.

6.4.2 AT THE EVERGLADES NP PSD CLASS I AREA

The modeling analysis results for the proposed CTs alone at the Everglades NP are summarized in Tables 6-7 through 6-10. As a conservative modeling approach, the project's maximum impacts at the Everglades NP were predicted with the ISCST3 model. The maximum pollutant concentrations predicted in the screening analysis for a single CT and two CTs firing natural gas are presented in Tables 6-7 and 6-8, respectively. A summary of maximum pollutant concentrations predicted for one and two CTs firing distillate oil is presented in Tables 6-9 and 6-10, respectively.

A summary of the project-only impacts at the Everglades NP is presented in Table 6-11. The maximum predicted SO_2, NO_2, and PM impacts due to the proposed CTs are all well below EPA's proposed PSD Class I significant impact levels. As discussed previously, the contemporaneous net emission decreases for the project results in overall emission decreases for SO_2, NO_x, and PM which will have the effect of expanding the Class I PSD increment in the Everglade NP.

6.5 FUTURE PLANT OPERATIONS

The maximum SO_2, NO_2, and PM_{10} concentrations due to all sources for future operations are presented for the screening and refined analyses in Tables 6-12 and 6-13, respectively. These results show that the maximum SO_2, NO_2, PM_{10}, and CO concentrations for future operations of the project with other emission sources will ensure compliance with and maintenance of the AAQS.

A summary of the ISCST3 model results for each year are presented in Appendix D. Examples of the model input files are also provided in Appendix D.

Table 6-1. Major Features of the ISCST3 Model, Version 99155

ISCST3 Model Features
• Polar or Cartesian coordinate systems for receptor locations
• Rural or one of three urban options which affect wind speed profile exponent, dispersion rates, and mixing height calculations
• Plume rise due to momentum and buoyancy as a function of downwind distance for stack emissions (Briggs, 1969, 1971, 1972, and 1975; Bowers, et al., 1979).
• Procedures suggested by Huber and Snyder (1976); Huber (1977); and Schulman and Scire (1980) for evaluating building wake effects
• Procedures suggested by Briggs (1974) for evaluating stack-tip downwash
• Separation of multiple emission sources
• Consideration of the effects of gravitational settling and dry deposition on ambient particulate concentrations
• Capability of simulating point, line, volume, area, and open pit sources
• Capability to calculate dry and wet deposition, including both gaseous and particulate precipitation scavenging for wet deposition
• Variation of wind speed with height (wind speed-profile exponent law)
• Concentration estimates for 1-hour to annual average times
• Terrain-adjustment procedures for elevated terrain including a terrain truncation algorithm for ISCST3; a built-in algorithm for predicting concentrations in complex terrain
• Consideration of time-dependent exponential decay of pollutants
• The method of Pasquill (1976) to account for buoyancy-induced dispersion
• A regulatory default option to set various model options and parameters to EPA recommended values (see text for regulatory options used)
• Procedure for calm-wind processing including setting wind speeds less than 1 meters per second(m/s) to 1 m/s.

Note: ISCST3 = Industrial Source Complex Short-Term.
Source: EPA, 1999.

Table 6.2. Maximum Pollutant Concentrations Predicted for One Proposed Combustion Turbine on Natural Gas, at Site Vicinity

	Maximum Emission Rates (lb/hr) by Operating Load and Air Temperature													Maximum Predicted Concentrations (ug/m³) by Operating Load and Air Temperature (1)											
	Base Load			75% Load			50% Load			Higher Power Mode			Averaging	Base Load			75% Load			50% Load			Higher Power Mode		
Pollutant	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Generic (10 g/s)	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.0192	0.0197	0.0210	0.0242	0.0245	0.0255	0.0286	0.0288	0.0300	0.0189	0.0192	0.0198
													24-Hour	0.2496	0.2526	0.3042	0.3237	0.3257	0.3318	0.3519	0.3533	0.3604	0.2473	0.2499	0.2533
													8-Hour	0.4493	0.4669	0.5271	0.6451	0.6474	0.6544	0.7496	0.7505	0.7554	0.4428	0.4503	0.4671
													3-Hour	0.8845	0.8872	0.8937	1.3682	1.3702	1.3768	1.4992	1.5010	1.5108	0.8824	0.8847	0.8878
													1-Hour	2.0424	2.0996	2.2074	2.4915	2.5788	2.6610	2.9123	2.9459	2.9958	1.9659	2.0753	2.1009
SO_2	5.1	4.9	4.4	4.1	4.0	3.6	3.3	3.2	2.9	5.3	5.1	4.8	Annual	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
													24-Hour	0.016	0.016	0.017	0.017	0.016	0.015	0.015	0.014	0.013	0.017	0.016	0.015
													3-Hour	0.057	0.055	0.050	0.071	0.069	0.062	0.062	0.061	0.055	0.059	0.057	0.054
NO_x	71.6	68.4	61.9	57.0	54.9	50.3	45.2	43.7	40.2	105.1	101.3	95.5	Annual	0.017	0.017	0.016	0.017	0.017	0.016	0.016	0.016	0.015	0.025	0.025	0.024
PM10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	Annual	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.002	0.002	0.002
													24-Hour	0.031	0.032	0.038	0.041	0.041	0.042	0.044	0.045	0.045	0.031	0.031	0.032
CO	30.3	28.8	26.2	24.4	23.5	21.7	20.1	19.5	18.3	50.5	2.7	44.7	8-Hour	0.172	0.169	0.174	0.198	0.192	0.179	0.190	0.184	0.174	0.282	0.015	0.263
													1-Hour	0.780	0.762	0.729	0.766	0.764	0.728	0.738	0.724	0.691	1.251	0.071	1.183

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.

Table 6-3. Maximum Pollutant Concentrations Predicted for 2 Simple-Cycle Combustion Turbines on Natural Gas Compared to EPA Significant Impact Levels, FPL Ft. Myers

		Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)												EPA Significant Impact Levels (ug/m^3)
		Base Load			75% Load			50% Load			Higher Power Mode			
Pollutant	Averaging Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	
SO_2	Annual	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.002	1
	24-Hour	0.032	0.031	0.034	0.033	0.033	0.030	0.029	0.028	0.026	0.033	0.032	0.031	5
	3-Hour	0.114	0.110	0.099	0.141	0.138	0.125	0.125	0.121	0.110	0.118	0.114	0.107	25
NO_x	Annual	0.035	0.034	0.033	0.035	0.034	0.032	0.033	0.032	0.030	0.050	0.049	0.048	1
PM_{10}	Annual	0.005	0.005	0.005	0.006	0.006	0.006	0.007	0.007	0.008	0.005	0.005	0.005	1
	24-Hour	0.06	0.06	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.06	0.06	0.06	5
CO	8-Hour	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.6	0.0	0.5	500
	1-Hour	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	2.5	0.1	2.4	2,000

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.

Table 6.4. Maximum Pollutant Concentrations Predicted for One Proposed Combustion Turbine on Fuel Oil, at Site Vicinity

	Maximum Emission Rates (lb/hr) by Operating Load and Air Temperature										Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)								
	Base Load			75% Load			50% Load			Averaging	Base Load			75% Load			50% Load		
Pollutant	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Generic (10 g/s)	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.0187	0.0191	0.0206	0.0237	0.0240	0.0249	0.0282	0.0284	0.0293
										24-Hour	0.2463	0.2492	0.3022	0.3208	0.3230	0.3286	0.3494	0.3506	0.3559
										8-Hour	0.4396	0.4483	0.5247	0.6418	0.6443	0.6507	0.7479	0.7487	0.7523
										3-Hour	0.8814	0.8842	0.8920	0.9284	0.9382	1.3733	1.4958	1.4974	1.5046
										1-Hour	1.9638	2.0297	2.2032	2.4857	2.4901	2.5922	2.8764	2.9098	2.9510
SO_2	103.1	98.6	89.1	82.0	78.8	72.2	64.7	62.6	57.7	Annual	0.024	0.024	0.023	0.024	0.024	0.023	0.023	0.022	0.021
										24-Hour	0.320	0.310	0.339	0.331	0.321	0.299	0.285	0.277	0.259
										3-Hour	1.145	1.098	1.001	0.959	0.932	1.249	1.219	1.181	1.094
NO_x	333.8	319.2	284.8	262.6	252.6	231.2	205.6	198.9	183.2	Annual	0.079	0.077	0.074	0.078	0.076	0.073	0.073	0.071	0.068
PM10	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	Annual	0.004	0.004	0.004	0.005	0.005	0.005	0.006	0.006	0.006
										24-Hour	0.053	0.053	0.065	0.069	0.069	0.070	0.075	0.075	0.076
CO	68.1	64.7	58.2	64.1	62.1	58.0	77.5	75.7	71.8	8-Hour	0.377	0.365	0.385	0.518	0.504	0.476	0.730	0.714	0.681
										1-Hour	1.685	1.655	1.616	2.008	1.948	1.894	2.809	2.775	2.670

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.

Table 6-5. Maximum Pollutant Concentrations Predicted for 2 Simple-Cycle Combustion Turbines on Fuel Oil at the Site Vicinity as Compared to EPA Significant Impact Levels, FPL Ft. Myers

Pollutant	Averaging Time	Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)									EPA Significant Impact Levels (ug/m^3)
		Base Load			75% Load			50% Load			
		35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	
SO_2	Annual	0.0486	0.0475	0.0462	0.0490	0.0476	0.0453	0.0460	0.0448	0.0426	1
	24-Hour	0.640	0.619	0.679	0.663	0.641	0.598	0.570	0.553	0.518	5
	3-Hour	2.290	2.197	2.003	1.918	1.863	2.499	2.439	2.362	2.188	25
NO_x	Annual	0.157	0.154	0.148	0.157	0.153	0.145	0.146	0.142	0.135	1
PM10	Annual	0.0080	0.0082	0.0088	0.0102	0.0103	0.0107	0.0121	0.0122	0.0126	1
	24-Hour	0.11	0.11	0.13	0.14	0.14	0.14	0.15	0.15	0.15	5
CO	8-Hour	0.75	0.73	0.77	1.04	1.01	0.95	1.46	1.43	1.36	500
	1-Hour	3.37	3.31	3.23	4.02	3.90	3.79	5.62	5.55	5.34	2,000

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.
NA = Not applicable

Table 6-6. Summary of Maximum Pollutant Concentrations Predicted for Two Combustion Turbines Compared to the EPA Significant Impact Levels and PSD Class II Increments

Pollutant	Averaging Time	Maximum Predicted Concentration (ug/m^3) (1)	EPA Significant Impact Levels (ug/m^3)	PSD Class II Increments (ug/m^3)
Natural Gas				
SO_2	Annual	0.002	1	20
	24-Hour	0.03	5	91
	3-Hour	0.14	25	512
PM10	Annual	0.008	1	17
	24-Hour	0.09	5	30
NO_2	Annual	0.03	1	25
CO	8-Hour	0.40	500	NA
	1-Hour	1.56	2,000	NA
Fuel Oil				
SO_2	Annual	0.049	1	20
	24-Hour	0.68	5	91
	3-Hour	2.50	25	512
PM10	Annual	0.013	1	17
	24-Hour	0.15	5	30
NO_2	Annual	0.16	1	25
CO	8-Hour	1.46	500	NA
	1-Hour	5.62	2,000	NA

(1) Concentrations are highest predicted using ISCST3 model and 5-year meteorological data set

Table 6.7. Maximum Pollutant Concentrations Predicted for One Proposed Combustion Turbine on Natural Gas, at Everglades National Park PSD Class I Area

Pollutant	Maximum Emission Rates (lb/hr) by Operating Load and Air Temperature												Averaging Time	Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)											
	Base Load			75% Load			50% Load			Higher Power Mode				Base Load			75% Load			50% Load			Higher Power Mode		
	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F		32°F	59°F	95°F	32°F	59°F	95°F	32°F	59°F	95°F	32°F	59°F	95°F
Generic (10 g/s)	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.0021	0.0022	0.0023	0.0025	0.0025	0.0025	0.0027	0.0027	0.0028	0.0021	0.0021	0.0022
													24-Hour	0.0608	0.0617	0.0639	0.0691	0.0696	0.0713	0.0770	0.0774	0.0794	0.0602	0.0609	0.0620
													8-Hour	0.1625	0.1644	0.1689	0.1792	0.1803	0.1834	0.1928	0.1934	0.1966	0.1611	0.1628	0.1649
													3-Hour	0.3001	0.3057	0.3192	0.3509	0.3541	0.3638	0.3940	0.3961	0.4065	0.2960	0.3008	0.3071
													1-Hour	0.5503	0.5582	0.5773	0.6217	0.6260	0.6391	0.6796	0.6822	0.6958	0.5443	0.5511	0.5601
SO_2	5.1	4.9	4.4	4.1	4.0	3.6	3.3	3.2	2.9	5.3	5.1	4.8	Annual	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
													24-Hour	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004
													3-Hour	0.019	0.019	0.018	0.018	0.018	0.017	0.016	0.016	0.015	0.020	0.019	0.019
NO_x	71.6	68.4	61.9	57.0	54.9	50.3	45.2	43.7	40.2	105.1	101.3	95.5	Annual	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.003	0.003	0.003
PM_{10}	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	Annual	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
													24-Hour	0.008	0.008	0.008	0.009	0.009	0.009	0.010	0.010	0.010	0.008	0.008	0.008
CO	30.3	28.8	26.2	24.4	23.5	21.7	20.1	19.5	18.3	50.5	2.7	44.7	8-Hour	0.062	0.060	0.056	0.055	0.053	0.050	0.049	0.048	0.045	0.103	0.006	0.093
													1-Hour	0.210	0.203	0.191	0.191	0.185	0.175	0.172	0.168	0.160	0.346	0.019	0.315

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.

Table 6-8. Maximum Pollutant Concentrations Predicted for 2 Simple-Cycle Combustion Turbines on Natural Gas at the Everglades National Park as Compared to Proposed EPA PSD Class I Significant Impact Levels

		Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)												Proposed EPA Class I Significant Impact Levels (ug/m^3)
	Averaging	Base Load			75% Load			50% Load			Higher Power Mode			
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	
SO_2	Annual	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.1
	24-Hour	0.008	0.008	0.007	0.007	0.007	0.006	0.006	0.006	0.006	0.008	0.008	0.007	0.2
	3-Hour	0.039	0.038	0.035	0.036	0.036	0.033	0.033	0.032	0.030	0.040	0.039	0.037	1.0
NO_x	Annual	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.006	0.005	0.005	0.1
PM10	Annual	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0005	0.0005	0.0005	0.2
	24-Hour	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.3
CO	8-Hour	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.21	0.01	0.19	NA
	1-Hour	0.42	0.41	0.38	0.38	0.37	0.35	0.34	0.34	0.32	0.69	0.04	0.63	NA

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.
NA = Not applicable

Table 6-9. Maximum Pollutant Concentrations Predicted for One Proposed Combustion Turbine on Fuel Oil, at Everglades National Park PSD Class I Area

	Maximum Emission Rates (lb/hr) by Operating Load and Air Temperature										Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)								
	Base Load			75% Load			50% Load			Averaging	Base Load			75% Load			50% Load		
Pollutant	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F
Generic (10 g/s)	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	79.37	Annual	0.0021	0.0021	0.0022	0.0025	0.0025	0.0025	0.0027	0.0027	0.0027
										24-Hour	0.0598	0.0607	0.0633	0.0683	0.0689	0.0704	0.0763	0.0767	0.0782
										8-Hour	0.1604	0.1623	0.1677	0.1778	0.1789	0.1818	0.1917	0.1923	0.1947
										3-Hour	0.2939	0.2995	0.3156	0.3464	0.3499	0.3589	0.3903	0.3922	0.4000
										1-Hour	0.5414	0.5494	0.5724	0.6155	0.6202	0.6324	0.6746	0.6771	0.6873
SO_2	103.1	98.6	89.1	82.0	78.8	72.2	64.7	62.6	57.7	Annual	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002
										24-Hour	0.078	0.075	0.071	0.071	0.068	0.064	0.062	0.060	0.057
										3-Hour	0.382	0.372	0.354	0.358	0.347	0.326	0.318	0.309	0.291
NO_x	333.8	319.2	284.8	262.6	252.6	231.2	205.6	198.9	183.2	Annual	0.009	0.009	0.008	0.008	0.008	0.007	0.007	0.007	0.006
PM10	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	Annual	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001
										24-Hour	0.013	0.013	0.014	0.015	0.015	0.015	0.016	0.016	0.017
CO	68.1	64.7	58.2	64.1	62.1	58.0	77.5	75.7	71.8	8-Hour	0.138	0.132	0.123	0.144	0.140	0.133	0.187	0.183	0.176
										1-Hour	0.465	0.448	0.420	0.497	0.485	0.462	0.659	0.646	0.622

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.

Table 6-10. Maximum Pollutant Concentrations Predicted for 2 Simple-Cycle Combustion Turbines on Fuel Oil at the Everglades National Park as Compared to Proposed EPA PSD Class I Significant Impact Levels

		Maximum Predicted Concentrations (ug/m^3) by Operating Load and Air Temperature (1)									Proposed EPA Class I Significant Impact Levels (ug/m^3)
	Averaging	Base Load			75% Load			50% Load			
Pollutant	Time	35°F	59°F	95°F	35°F	59°F	95°F	35°F	59°F	95°F	
SO_2	Annual	0.0055	0.0053	0.0050	0.0051	0.0049	0.0046	0.0044	0.0042	0.0040	0.1
	24-Hour	0.155	0.151	0.142	0.141	0.137	0.128	0.124	0.121	0.114	0.2
	3-Hour	0.764	0.744	0.709	0.716	0.695	0.653	0.636	0.619	0.582	1.0
NO_x	Annual	0.018	0.017	0.016	0.016	0.016	0.015	0.014	0.013	0.013	0.1
PM10	Annual	0.0009	0.0009	0.0010	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.2
	24-Hour	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.3
CO	8-Hour	0.28	0.26	0.25	0.29	0.28	0.27	0.37	0.37	0.35	NA
	1-Hour	0.93	0.90	0.84	0.99	0.97	0.92	1.32	1.29	1.24	NA

(1) Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at Palm Beach International Airport.
NA = Not applicable

Table 6-11. Summary of Maximum Pollutant Concentrations Predicted for Two Combustion Turbines Compared to the EPA Class I Significant Impact Levels and PSD Class I Increments

Pollutant	Averaging Time	Maximum Predicted Concentration (ug/m^3) (1)	EPA Class I Significant Impact Levels (ug/m^3)	PSD Class I Increments (ug/m^3)
Natural Gas				
SO_2	Annual	0.0003	0.1	2
	24-Hour	0.008	0.2	5
	3-Hour	0.039	1.0	25
PM10	Annual	0.0007	0.2	4
	24-Hour	0.02	0.3	8
NO_2	Annual	0.004	0.1	2.5
Fuel Oil				
SO_2	Annual	0.0055	0.1	2
	24-Hour	0.16	0.2	5
	3-Hour	0.76	1.0	25
PM10	Annual	0.0012	0.2	4
	24-Hour	0.03	0.3	8
NO_2	Annual	0.018	0.1	2.5

(1) Concentrations are highest predicted using ISCST3 model and 5-year meteorological data set

Table 6-12. Maximum SO_2, NO_2, and PM_{10} Impacts Due to Modeled Sources for Future Operations (Proposed CTs, Combined-Cycle Mode) - Screening Analysis

Averaging Time	Value	Concentration (μg/m³)	Receptor Location[a] Direction (degrees)	Distance (m)	Period Ending (YYMMDDHH)
SO_2					
Annual	Highest	2.3	200	11,000	87123124
		2.7	240	10,000	88123124
		2.2	270	8,000	89123124
		3.8	240	10,000	90123124
		2.7	230	10,000	91123124
24-hour	HSH	28	190	12,000	87100524
		25	240	10,000	88102824
		21	300	5,000	89082824
		26	250	15,000	90031224
		24	250	17,000	91111424
3-hour	HSH	100	200	15,000	87042706
		98	260	13,000	88092824
		85	180	11,000	89031024
		99	160	15,000	90102621
		99	240	1,500	91062415
NO_2					
Annual	Highest	4.6	200	10,000	87123124
		4.3	240	8,000	88123124
		3.4	270	8,000	89123124
		6.0	240	10,000	90123124
		4.3	240	7,000	91123124
PM_{10}					
Annual	Highest	0.4	230	919	87123124
		0.4	230	919	88123124
		0.4	280	300	89123124
		0.6	230	1,100	90123124
		0.5	230	919	91123124
24-Hour	HSH	3.7	230	919	87081724
		3.9	130	700	88070124
		3.7	320	700	89091424
		3.5	220	906	90042424
		3.9	130	500	91042124

Note: YY=Year, MM=Month, DD=Day, HH=Hour, HSH=Highest, Second-Highest.

[a] Relative to the center of the proposed CT HRSG stacks.

[b] Refined modeling analysis performed for this concentration.

Table 6-13. Maximum SO_2, NO_2, and PM_{10} Impacts Predicted for All Sources for Future Operations Compared to AAQS--Refined Analysis

Averaging Time	Value	Concentration (µg/m³) Total	Modeled Sources	Background	Receptor Location[a] Direction (degrees)	Distance (m)	Period Ending (YYMMDDHH)	Florida AAQS (µg/m³)
SO_2								
Annual	Highest	9	3.9	5	37.5	10,300	90123124	60
24-hour	HSH	60	28	31	190	11,900	97100524	260
3-hour	HSH	211	111	100	191.25	14,000	87100506	1,300
		203	103	100	256	12,300	88091703	
		199	99	100	160.25	14,100	90102621	
		212	112	100	244	1,600	91062512	
NO_2								
Annual	Highest	26	6.1	20	237.5	10,200	90123124	100
PM_{10}								
Annual	Highest	19	0.6	18	226	900	90123124	50
24-Hour	HSH	37	4.2	33	130	600	88070124	150
		37	3.9	33	130	500	91042124	

Note: YY=Year, MM=Month, DD=Day, HH=Hour, HSH=Highest, Second-Highest.

[a] Relative to the center of the proposed CT HRSG stacks.

APPENDIX A

EXPECTED PERFORMANCE AND EMISSION INFORMATION ON GE FRAME 7FA COMBUSTION TURBINE

Table A-1. Design Information and Stack Parameters for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	181.64	172.44	163.14	149.74
Net heat rate (Btu/kWh, LHV)	9,213	9,280	9,412	9,666
(Btu/kWh, HHV)	10,227	10,301	10,447	10,729
Heat Input (MMBtu/hr, LHV)	1,674	1,600	1,536	1,447
(MMBtu/hr, HHV)	1,858	1,776	1,704	1,607
Fuel heating value (Btu/lb, LHV)	20,835	20,835	20,835	20,835
(Btu/lb, HHV)	23,127	23,127	23,127	23,127
(HHV/LHV)	1.110	1.110	1.110	1.110
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	3,706,000	3,539,000	3,418,000	3,257,000
- provided	3,706,000	3,539,000	3,418,000	3,257,000
Temperature (°F)	1,095	1,116	1,128	1,143
Moisture (% Vol.)	7.56	8.39	9.04	9.92
Oxygen (% Vol.)	12.60	12.44	12.36	12.27
Molecular Weight	28.49	28.39	28.33	28.22
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,674	1,600	1,536	1,447
Heat content (Btu/lb, LHV)	20,835	20,835	20,835	20,835
Fuel usage (lb/hr)- calculated	80,322	76,808	73,698	69,470
CT Stack				
CT- Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions (CT Stack-Unit 4 only)				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	3,706,000	3,539,000	3,418,000	3,257,000
Temperature (°F)	1,095	1,116	1,128	1,143
Molecular weight	28.49	28.39	28.33	28.22
Volume flow (acfm)- calculated	2,460,544	2,389,462	2,331,000	2,250,314
(ft3/s)- calculated	41,009	39,824	38,850	37,505
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)^2 /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,095	1,116	1,128	1,143
CT volume flow (acfm)	2,460,544	2,389,462	2,331,000	2,250,314
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	124.2	120.7	117.7	113.6

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft^2; 14.7 lb/ft^3
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000.

Table A-2. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	10	10	10	10
Emission rate (lb/hr)- provided	10.0	10.0	10.0	10.0
(TPY)	43.8	43.8	43.8	43.8
Sulfur Dioxide (lb/hr) = Natural gas (cf/hr) x sulfur content(gr/100 cf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel density (lb/ft^3)	0.0448	0.0448	0.0448	0.0448
Fuel use (cf/hr)	1,793,537	1,715,087	1,645,639	1,551,219
Sulfur content (grains/ 100 cf)	1	1	1	1
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	5.1	4.9	4.7	4.4
(TPY)	22.44	21.46	20.59	19.41
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	10.5	10.5	10.5	10.5
Moisture (%)	7.56	8.39	9.04	9.92
Oxygen (%)	12.6	12.44	12.36	12.27
Turbine Flow (acfm)	2,460,544	2,389,462	2,331,000	2,250,314
Turbine Exhaust Temperature (°F)	1,095	1,116	1,128	1,143
Emission rate (lb/hr)	71.6	68.4	65.7	61.9
(TPY)	313.4	299.7	287.8	271.3
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	9	9	9	9
Moisture (%)	7.56	8.39	9.04	9.92
Turbine Flow (acfm)	2,460,544	2,389,462	2,331,000	2,250,314
Turbine Exhaust Temperature (°F)	1,095	1,116	1,128	1,143
Emission rate (lb/hr)	30.3	28.8	27.7	26.2
(TPY)	132.7	126.0	121.1	114.7
(lb/mmBtu)	0.016312297	0.016198155	0.01622828	0.016305329
VOCs (lb/hr) = VOC(ppmvd) x [1-Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	1.5	1.5	1.5	1.5
Moisture (%)	7.56	8.39	9.04	9.92
Turbine Flow (acfm)	2,460,544	2,389,462	2,331,000	2,250,314
Turbine Exhaust Temperature (°F)	1,095	1,116	1,128	1,143
Emission rate (lb/hr)	2.89	2.74	2.63	2.49
(TPY)	12.6	12.0	11.5	10.9
Lead (lb/hr)= NA				
Emission Rate Basis	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA
(TPY)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 1996

Table A-3. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
2,3,7,8 TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Heat Input Rate (MMBtu/hr)	1.86E+03	1.78E+03	1.70E+03	1.61E+03
Emission Rate (lb/hr)	2.23E-09	2.13E-09	2.05E-09	1.93E-09
(TPY)	9.76E-09	9.34E-09	8.96E-09	8.44E-09
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	7.48E-04	7.48E-04	7.48E-04	7.48E-04
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	1.39E-06	1.33E-06	1.27E-06	1.20E-06
(TPY)	6.09E-06	5.82E-06	5.58E-06	5.26E-06
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	1,793,537	1,715,087	1,645,639	1,551,219
Sulfur (lb/hr)	2.56	2.45	2.35	2.22
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (c)	5	5	5	5
Emission Rate (lb/hr)	0.39	0.38	0.36	0.34
(TPY)	1.72	1.64	1.58	1.49

Sources: (a) Golder Associates, 2000; (b) EPA, 1981; (c) Assumed.

Note: No Emission Factors for Hydrogen chloride (HCl) from natural gas firing.

Table A-4. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Acetalhyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	40.00	40.00	40.00	40.00
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	7.43E-02	7.11E-02	6.82E-02	6.43E-02
(TPY)	3.25E-01	3.11E-01	2.99E-01	2.81E-01
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	12	12	12	12
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	2.23E-02	2.13E-02	2.05E-02	1.93E-02
(TPY)	9.76E-02	9.34E-02	8.96E-02	8.44E-02
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.43	0.43	0.43	0.43
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	7.99E-04	7.64E-04	7.33E-04	6.91E-04
(TPY)	3.50E-03	3.35E-03	3.21E-03	3.03E-03
Acrolein (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	6.4	6.4	6.4	6.4
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	1.19E-02	1.14E-02	1.09E-02	1.03E-02
(TPY)	5.21E-02	4.98E-02	4.78E-02	4.50E-02
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	150	150	150	150
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	2.79E-01	2.66E-01	2.56E-01	2.41E-01
(TPY)	1.22E+00	1.17E+00	1.12E+00	1.06E+00
Ethylbenzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	32.0	32.0	32.0	32.0
Heat Input Rate (MMBtu/hr)	1.86E+03	1.78E+03	1.70E+03	1.61E+03
Emission Rate (lb/hr)	5.94E-02	5.68E-02	5.45E-02	5.14E-02
(TPY)	2.60E-01	2.49E-01	2.39E-01	2.25E-01
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.3	1.3	1.3	1.3
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	2.41E-03	2.31E-03	2.22E-03	2.09E-03
(TPY)	1.06E-02	1.01E-02	9.70E-03	9.15E-03
Propylene Oxide (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	29.0	29.0	29.0	29.0
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	5.39E-02	5.15E-02	4.94E-02	4.66E-02
(TPY)	2.36E-01	2.26E-01	2.16E-01	2.04E-01
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} I				
Basis (b) , lb/10^{12} Btu	22.0	22.0	22.0	22.0
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	4.09E-02	3.91E-02	3.75E-02	3.53E-02
(TPY)	1.79E-01	1.71E-01	1.64E-01	1.55E-01
Xylene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	64.0	64.0	64.0	64.0
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	1.19E-01	1.14E-01	1.09E-01	1.03E-01
(TPY)	5.21E-01	4.98E-01	4.78E-01	4.50E-01
Toluene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	130	130	130	130
Heat Input Rate (MMBtu/hr)	1,858	1,776	1,704	1,607
Emission Rate (lb/hr)	2.41E-01	2.31E-01	2.22E-01	2.09E-01
(TPY)	1.06E+00	1.01E+00	9.70E-01	9.15E-01

Sources: (a) Golder Associates, 2000; (b) EPA, 2000 (AP-42,Table 3.1-4)

Table A-5. Design Information and Stack Parameters for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	136.7	129.24	122.24	112.24
Net heat rate (Btu/kWh, LHV)	9,855	10,043	10,236	10,602
(Btu/kWh, HHV)	10,939	11,148	11,362	11,769
Heat Input (MMBtu/hr, LHV)	1,347	1,298	1,251	1,190
(MMBtu/hr, HHV)	1,495	1,441	1,389	1,321
Fuel heating value (Btu/lb, LHV)	20,835	20,835	20,835	20,835
(Btu/lb, HHV)	23,127	23,127	23,127	23,127
(HHV/LHV)	1.110	1.110	1.110	1.110
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	2,979,000	2,888,000	2,803,000	2,694,000
- provided	2,979,000	2,888,000	2,803,000	2,694,000
Temperature (°F)	1,122	1,139	1,153	1,170
Moisture (% Vol.)	7.49	8.27	8.92	9.8
Oxygen (% Vol.)	12.67	12.57	12.49	12.41
Molecular Weight	28.50	28.41	28.33	28.23
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,347	1,298	1,251	1,190
Heat content (Btu/lb, LHV)	20,835	20,835	20,835	20,835
Fuel usage (lb/hr)- calculated	64,660	62,299	60,058	57,115
CT Stack				
CT- Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions (CT Stack-Unit 4 only)				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	2,979,000	2,888,000	2,803,000	2,694,000
Temperature (°F)	1,122	1,139	1,153	1,170
Molecular weight	28.50	28.41	28.33	28.23
Volume flow (acfm)- calculated	2,011,853	1,977,488	1,941,432	1,892,412
(ft3/s)- calculated	33,531	32,958	32,357	31,540
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)^2 /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,122	1,139	1,153	1,170
CT volume flow (acfm)	2,011,853	1,977,488	1,941,432	1,892,412
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	101.6	99.9	98.0	95.6

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft^2; 14.7 lb/ft^3
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000.

Table A-6. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	10	10	10	10
Emission rate (lb/hr)- provided	10.0	10.0	10.0	10.0
(TPY)	43.8	43.8	43.8	43.8
Sulfur Dioxide (lb/hr) = Natural gas (cf/hr) x sulfur content(gr/100 cf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel density (lb/ft^3)	0.0448	0.0448	0.0448	0.0448
Fuel use (cf/hr)	1,443,832	1,391,103	1,341,054	1,275,357
Sulfur content (grains/ 100 cf)	1	1	1	1
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	4.1	4.0	3.8	3.6
(TPY)	18.07	17.41	16.78	15.96
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	10.5	10.5	10.5	10.5
Moisture (%)	7.49	8.27	8.92	9.8
Oxygen (%)	12.67	12.57	12.49	12.41
Turbine Flow (acfm)	2,011,853	1,977,488	1,941,432	1,892,412
Turbine Exhaust Temperature (°F)	1,122	1,139	1,153	1,170
Emission rate (lb/hr)	57.0	54.9	53.0	50.3
(TPY)	249.8	240.6	232.2	220.4
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	9	9	9	9
Moisture (%)	7.49	8.27	8.92	9.8
Turbine Flow (acfm)	2,011,853	1,977,488	1,941,432	1,892,412
Turbine Exhaust Temperature (°F)	1,122	1,139	1,153	1,170
Emission rate (lb/hr)	24.4	23.5	22.7	21.7
(TPY)	106.7	102.9	99.5	95.0
VOCs (lb/hr) = VOC(ppmvd) x [1-Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	1.5	1.5	1.5	1.5
Moisture (%)	7.49	8.27	8.92	9.8
Turbine Flow (acfm)	2,011,853	1,977,488	1,941,432	1,892,412
Turbine Exhaust Temperature (°F)	1,122	1,139	1,153	1,170
Emission rate (lb/hr)	2.32	2.24	2.16	2.07
(TPY)	10.2	9.8	9.5	9.0
Lead (lb/hr)= NA				
Emission Rate Basis	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA
(TPY)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 1996

Table A-7. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
2,3,7,8-TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Heat Input Rate (MMBtu/hr)	1.50E+03	1.44E+03	1.39E+03	1.32E+03
Emission Rate (lb/hr)	1.79E-09	1.73E-09	1.67E-09	1.59E-09
(TPY)	7.86E-09	7.57E-09	7.30E-09	6.94E-09
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	7.48E-04	7.48E-04	7.48E-04	7.48E-04
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	1.12E-06	1.08E-06	1.04E-06	9.88E-07
(TPY)	4.90E-06	4.72E-06	4.55E-06	4.33E-06
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	1,443,832	1,391,103	1,341,054	1,275,357
Sulfur (lb/hr)	2.06	1.99	1.92	1.82
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (c)	5	5	5	5
Emission Rate (lb/hr)	0.32	0.30	0.29	0.28
(TPY)	1.38	1.33	1.28	1.22

Sources: (a) Golder Associates, 2000; (b) EPA, 1981; (c) Assumed.

Table A-8. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Acetalhyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	40.0	40.0	40.0	40.0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	5.98E-02	5.76E-02	5.56E-02	5.28E-02
(TPY)	2.62E-01	2.52E-01	2.43E-01	2.31E-01
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	12.0	12.0	12.0	12.0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	1.79E-02	1.73E-02	1.67E-02	1.59E-02
(TPY)	7.86E-02	7.57E-02	7.30E-02	6.94E-02
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.43	0.43	0.43	0.43
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	6.43E-04	6.20E-04	5.97E-04	5.68E-04
(TPY)	2.82E-03	2.71E-03	2.62E-03	2.49E-03
Acrolein (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	6.4	6.4	6.4	6.4
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	9.57E-03	9.22E-03	8.89E-03	8.45E-03
(TPY)	4.19E-02	4.04E-02	3.89E-02	3.70E-02
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	150	150	150	150
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	2.24E-01	2.16E-01	2.08E-01	1.98E-01
(TPY)	9.82E-01	9.47E-01	9.13E-01	8.68E-01
Ethylbenzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	32.0	32.0	32.0	32.0
Heat Input Rate (MMBtu/hr)	1.50E+03	1.44E+03	1.39E+03	1.32E+03
Emission Rate (lb/hr)	4.79E-02	4.61E-02	4.44E-02	4.23E-02
(TPY)	2.10E-01	2.02E-01	1.95E-01	1.85E-01
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.3	1.3	1.3	1.3
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	1.94E-03	1.87E-03	1.81E-03	1.72E-03
(TPY)	8.51E-03	8.20E-03	7.91E-03	7.52E-03
Propylene Oxide (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	29.0	29.0	29.0	29.0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	4.34E-02	4.18E-02	4.03E-02	3.83E-02
(TPY)	1.90E-01	1.83E-01	1.76E-01	1.68E-01
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	22.0	22.0	22.0	22.0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	3.29E-02	3.17E-02	3.06E-02	2.91E-02
(TPY)	1.44E-01	1.39E-01	1.34E-01	1.27E-01
Xylene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	64.0	64.0	64.0	64.0
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	9.57E-02	9.22E-02	8.89E-02	8.45E-02
(TPY)	4.19E-01	4.04E-01	3.89E-01	3.70E-01
Toluene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	130	130	130	130
Heat Input Rate (MMBtu/hr)	1,495	1,441	1,389	1,321
Emission Rate (lb/hr)	1.94E-01	1.87E-01	1.81E-01	1.72E-01
(TPY)	8.51E-01	8.20E-01	7.91E-01	7.52E-01

Sources: (a) Golder Associates, 2000; (b) EPA, 2000 (AP-42,Table 3.1-4)

Table A-9. Design Information and Stack Parameters for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	91.1	86.5	81.34	74.64
Net heat rate (Btu/kWh, LHV)	11,820	12,050	12,415	12,866
(Btu/kWh, HHV)	13,120	13,375	13,780	14,281
Heat Input (MMBtu/hr, LHV)	1,077	1,042	1,010	960
(MMBtu/hr, HHV)	1,195	1,157	1,121	1,066
Fuel heating value (Btu/lb, LHV)	20,835	20,835	20,835	20,835
(Btu/lb, HHV)	23,127	23,127	23,127	23,127
(HHV/LHV)	1.110	1.110	1.110	1.110
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	2,456,000	2,396,000	2,336,000	2,267,000
- provided	2,456,000	2,396,000	2,336,000	2,267,000
Temperature (°F)	1,168	1,184	1,195	1,200
Moisture (% Vol.)	7.21	7.97	8.62	9.45
Oxygen (% Vol.)	12.99	12.90	12.83	12.80
Molecular Weight	28.51	28.43	28.35	28.25
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,077	1,042	1,010	960
Heat content (Btu/lb, LHV)	20,835	20,835	20,835	20,835
Fuel usage (lb/hr)- calculated	51,682	50,026	48,467	46,091
CT Stack				
CT- Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions (CT Stack-Unit 4 only)				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	2,456,000	2,396,000	2,336,000	2,267,000
Temperature (°F)	1,168	1,184	1,195	1,200
Molecular weight	28.51	28.43	28.35	28.25
Volume flow (acfm)- calculated	1,705,874	1,685,637	1,658,984	1,620,525
(ft3/s)- calculated	28,431	28,094	27,650	27,009
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,168	1,184	1,195	1,200
CT volume flow (acfm)	1,705,874	1,685,637	1,658,984	1,620,525
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	86.1	85.1	83.8	81.8

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft²; 14.7 lb/ft³
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000.

Table A-10. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	10	10	10	10
Emission rate (lb/hr)- provided	10.0	10.0	10.0	10.0
(TPY)	43.8	43.8	43.8	43.8
Sulfur Dioxide (lb/hr) = Natural gas (cf/hr) x sulfur content(gr/100 cf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel density (lb/ft^3)	0.0448	0.0448	0.0448	0.0448
Fuel use (cf/hr)	1,154,037	1,117,062	1,082,231	1,029,181
Sulfur content (grains/ 100 cf)	1	1	1	1
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	3.3	3.2	3.1	2.9
(TPY)	14.44	13.98	13.54	12.88
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	10.5	10.5	10.5	10.5
Moisture (%)	7.21	7.97	8.62	9.45
Oxygen (%)	12.99	12.9	12.83	12.8
Turbine Flow (acfm)	1,705,874	1,685,637	1,658,984	1,620,525
Turbine Exhaust Temperature (°F)	1,168	1,184	1,195	1,200
Emission rate (lb/hr)	45.2	43.7	42.3	40.2
(TPY)	197.8	191.4	185.2	176.2
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	9	9	9	9
Moisture (%)	7.21	7.97	8.62	9.45
Turbine Flow (acfm)	1,705,874	1,685,637	1,658,984	1,620,525
Turbine Exhaust Temperature (°F)	1,168	1,184	1,195	1,200
Emission rate (lb/hr)	20.1	19.5	19.0	18.3
(TPY)	88.2	85.6	83.1	80.2
VOCs (lb/hr) = VOC(ppmvd) x [1-Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	1.5	1.5	1.5	1.5
Moisture (%)	7.21	7.97	8.62	9.45
Turbine Flow (acfm)	1,705,874	1,685,637	1,658,984	1,620,525
Turbine Exhaust Temperature (°F)	1,168	1,184	1,195	1,200
Emission rate (lb/hr)	1.92	1.86	1.81	1.74
(TPY)	8.4	8.2	7.9	7.6
Lead (lb/hr)= NA				
Emission Rate Basis	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA
(TPY)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 1998; EPA, 1996

Table A-11. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycel CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 50% Load

	Turbine Inlet Temperature			
Parameter	35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
2,3,7,8-TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Heat Input Rate (MMBtu/hr)	1.20E+03	1.16E+03	1.12E+03	1.07E+03
Emission Rate (lb/hr)	1.43E-09	1.39E-09	1.35E-09	1.28E-09
(TPY)	6.28E-09	6.08E-09	5.89E-09	5.60E-09
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	7.48E-04	7.48E-04	7.48E-04	7.48E-04
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	8.94E-07	8.65E-07	8.38E-07	7.97E-07
(TPY)	3.92E-06	3.79E-06	3.67E-06	3.49E-06
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	1,154,037	1,117,062	1,082,231	1,029,181
Sulfur (lb/hr)	1.65	1.60	1.55	1.47
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (c)	5	5	5	5
Emission Rate (lb/hr)	0.25	0.24	0.24	0.23
(TPY)	1.11	1.07	1.04	0.99

Sources: (a) Golder Associates, 2000; (b) EPA, 1981; (c) Assumed.

Table A-12. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	8,760	8,760	8,760	8,760
Acetalhyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	40.0	40.0	40.0	40.0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	4.78E-02	4.63E-02	4.48E-02	4.26E-02
(TPY)	2.09E-01	2.03E-01	1.96E-01	1.87E-01
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	12.0	12.0	12.0	12.0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	1.43E-02	1.39E-02	1.35E-02	1.28E-02
(TPY)	6.28E-02	6.08E-02	5.89E-02	5.60E-02
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.43	0.43	0.43	0.43
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	5.14E-04	4.97E-04	4.82E-04	4.58E-04
(TPY)	2.25E-03	2.18E-03	2.11E-03	2.01E-03
Acrolein (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	6.4	6.4	6.4	6.4
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	7.65E-03	7.40E-03	7.17E-03	6.82E-03
(TPY)	3.35E-02	3.24E-02	3.14E-02	2.99E-02
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	150	150	150	150
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	1.79E-01	1.74E-01	1.68E-01	1.60E-01
(TPY)	7.85E-01	7.60E-01	7.36E-01	7.00E-01
Ethylbenzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	32.0	32.0	32.0	32.0
Heat Input Rate (MMBtu/hr)	1.20E+03	1.16E+03	1.12E+03	1.07E+03
Emission Rate (lb/hr)	3.82E-02	3.70E-02	3.59E-02	3.41E-02
(TPY)	1.68E-01	1.62E-01	1.57E-01	1.49E-01
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.3	1.3	1.3	1.3
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	1.55E-03	1.50E-03	1.46E-03	1.39E-03
(TPY)	6.81E-03	6.59E-03	6.38E-03	6.07E-03
Propylene Oxide (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	29.0	29.0	29.0	29.0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	3.47E-02	3.36E-02	3.25E-02	3.09E-02
(TPY)	1.52E-01	1.47E-01	1.42E-01	1.35E-01
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} I				
Basis (b) , lb/10^{12} Btu	22.0	22.0	22.0	22.0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	2.63E-02	2.55E-02	2.47E-02	2.35E-02
(TPY)	1.15E-01	1.11E-01	1.08E-01	1.03E-01
Xylene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	64.0	64.0	64.0	64.0
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	7.65E-02	7.40E-02	7.17E-02	6.82E-02
(TPY)	3.35E-01	3.24E-01	3.14E-01	2.99E-01
Toluene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	130	130	130	130
Heat Input Rate (MMBtu/hr)	1,195	1,157	1,121	1,066
Emission Rate (lb/hr)	1.55E-01	1.50E-01	1.46E-01	1.39E-01
(TPY)	6.81E-01	6.59E-01	6.38E-01	6.07E-01

Sources: (a) Golder Associates, 2000; (b) EPA, 2000 (AP-42,Table 3.1-4)

Table A-13. Design Information and Stack Parameters for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	189.1	180.4	172.5	172.5
Net heat rate (Btu/kWh, LHV)	10,019	10,037	10,101	9,486
(Btu/kWh, HHV)	10,620	10,639	10,707	10,056
Heat Input (MMBtu/hr, LHV)	1,895	1,811	1,743	1,637
(MMBtu/hr, HHV)	2,008	1,919	1,847	1,735
Fuel heating value (Btu/lb, LHV)	18,367	18,367	18,367	18,367
(Btu/lb, HHV)	19,469	19,469	19,469	19,469
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	3,862,000	3,683,000	3,552,000	3,376,000
- provided	3,862,000	3,683,000	3,552,000	3,376,000
Temperature (°F)	1,074	1,098	1,113	1,131
Moisture (% Vol.)	10.6	11.21	11.68	12.18
Oxygen (% Vol.)	11.19	11.06	11.00	11.00
Molecular Weight	28.39	28.33	28.27	28.21
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,895	1,811	1,743	1,637
Heat content (Btu/lb, LHV)	18,367	18,367	18,367	18,367
Fuel usage (lb/hr)- calculated	103,147	98,584	94,871	89,100
CT Stack				
CT - Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	3,862,000	3,683,000	3,552,000	3,376,000
Temperature (°F)	1,074	1,098	1,113	1,131
Molecular weight	28.39	28.33	28.27	28.21
Volume flow (acfm)- calculated	2,538,306	2,464,273	2,403,828	2,316,007
(ft3/s)- calculated	42,305	41,071	40,064	38,600
HRSG Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)^2 /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,074	1,098	1,113	1,131
CT volume flow (acfm)	2,538,306	2,464,273	2,403,828	2,316,007
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	128.2	124.4	121.4	116.9

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft^2; 14.7 lb/ft^3
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000

Table A-14. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	17	17	17	17
Emission rate (lb/hr)- provided	17.0	17.0	17.0	17.0
(TPY)	4.3	4.3	4.3	4.3
Sulfur Dioxide (lb/hr) = Natural gas (lb/hr) x sulfur content (%/100) x (lb SO_2 /lb S)				
Fuel Sulfur Content	0.05%	0.05%	0.05%	0.05%
Fuel use (lb/hr)	103,147	98,584	94,871	89,100
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	103.1	98.6	94.9	89.1
(TPY)	25.79	24.65	23.72	22.28
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	42	42	42	42
Moisture (%)	10.6	11.21	11.68	12.18
Oxygen (%)	11.19	11.06	11	11
Turbine Flow (acfm)	2,538,306	2,464,273	2,403,828	2,288,566
Turbine Exhaust Temperature (°F)	1,074	1,098	1,113	1,131
Emission rate (lb/hr)	333.8	319.2	306.8	284.8
(TPY)	83.5	79.8	76.7	71.2
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	20	20	20	20
Moisture (%)	10.6	11.21	11.68	12.18
Turbine Flow (acfm)	2,538,306	2,464,273	2,403,828	2,288,566
Turbine Exhaust Temperature (°F)	1,074	1,098	1,113	1,131
Emission rate (lb/hr)	68.1	64.7	62.1	58.2
(TPY)	17.0	16.2	15.5	14.5
VOCs (lb/hr) = VOC(ppmvw) x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvw	3.5	3.5	3.5	3.5
Turbine Flow (acfm)	2,538,306	2,464,273	2,403,828	2,288,566
Turbine Exhaust Temperature (°F)	1,074	1,098	1,113	1,131
Emission rate (lb/hr)	7.62	7.28	7.04	6.62
(TPY)	1.9	1.8	1.8	1.7
Lead (lb/hr)= NA				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
Emission rate (lb/hr)	0.0281	0.0269	0.0259	0.0243
(TPY)	0.0070	0.0067	0.0065	0.0061

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 2000.

Table A-15. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
2,3,7,8 TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	3.80E-04	3.80E-04	3.80E-04	3.80E-04
Heat Input Rate (MMBtu/hr)	2.01E+03	1.92E+03	1.85E+03	1.85E+03
Emission Rate (lb/hr)	7.63E-07	7.29E-07	7.02E-07	7.02E-07
(TPY)	1.91E-07	1.82E-07	1.75E-07	1.75E-07
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.31	0.31	0.31	0.31
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	6.23E-04	5.95E-04	5.73E-04	5.73E-04
(TPY)	1.56E-04	1.49E-04	1.43E-04	1.43E-04
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	32.54	32.54	32.54	32.54
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	6.53E-02	6.25E-02	6.01E-02	6.01E-02
(TPY)	1.63E-02	1.56E-02	1.50E-02	1.50E-02
Hydrogen Chloride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (c) , lb/10^{12} Btu	2.11E+02	2.11E+02	2.11E+02	2.11E+02
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	4.24E-01	4.05E-01	3.90E-01	3.90E-01
(TPY)	1.06E-01	1.01E-01	9.75E-02	9.75E-02
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.2	1.2	1.2	1.2
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	2.41E-03	2.30E-03	2.22E-03	2.22E-03
(TPY)	6.02E-04	5.76E-04	5.54E-04	5.54E-04
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	103,147	98,584	94,871	89,100
Sulfur (lb/hr)	51.57	49.29	47.44	44.55
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (d)	5	5	5	5
Emission Rate (lb/hr)	7.90	7.55	7.26	6.82
(TPY)	1.97	1.89	1.82	1.71

Sources: (a) EPA, 2000 (AP-42); (b) EPA, 1981; (c) 4 ppm assumed based on ASTM D2880
(d) assumed based on combustion estimates from GE

Table A-16. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, Base Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Arsenic (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11.0	11.0	11.0	11.0
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	2.21E-02	2.11E-02	2.03E-02	2.03E-02
(TPY)	5.52E-03	5.28E-03	5.08E-03	5.08E-03
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	55.0	55.0	55.0	55.0
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	1.10E-01	1.06E-01	1.02E-01	1.02E-01
(TPY)	2.76E-02	2.64E-02	2.54E-02	2.54E-02
Cadmium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.8	4.8	4.8	4.8
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	9.64E-03	9.21E-03	8.87E-03	8.87E-03
(TPY)	2.41E-03	2.30E-03	2.22E-03	2.22E-03
Chromium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11	11	11	11
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	2.21E-02	2.11E-02	2.03E-02	2.03E-02
(TPY)	5.52E-03	5.28E-03	5.08E-03	5.08E-03
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	280	280	280	280
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	5.62E-01	5.37E-01	5.17E-01	5.17E-01
(TPY)	1.41E-01	1.34E-01	1.29E-01	1.29E-01
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	35	35	35	35
Heat Input Rate (MMBtu/hr)	2.01E+03	1.92E+03	1.85E+03	1.85E+03
Emission Rate (lb/hr)	7.03E-02	6.72E-02	6.46E-02	6.46E-02
(TPY)	1.76E-02	1.68E-02	1.62E-02	1.62E-02
Manganese (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	790	790	790	790
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	1.59E+00	1.52E+00	1.46E+00	1.46E+00
(TPY)	3.97E-01	3.79E-01	3.65E-01	3.65E-01
Nickel (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.6	4.6	4.6	4.6
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	9.24E-03	8.83E-03	8.50E-03	8.50E-03
(TPY)	2.31E-03	2.21E-03	2.12E-03	2.12E-03
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	16	16	16	16
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	0.03213072	0.030709472	0.0295528	0.0295528
(TPY)	0.00803268	0.007677368	0.0073882	0.0073882
Selenium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	25	25	25	25
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	5.02E-02	4.80E-02	4.62E-02	4.62E-02
(TPY)	1.26E-02	1.20E-02	1.15E-02	1.15E-02
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12}				
Basis, lb/10^{12} Btu	40	40	40	40
Heat Input Rate (MMBtu/hr)	2,008	1,919	1,847	1,847
Emission Rate (lb/hr)	8.03E-02	7.68E-02	7.39E-02	7.39E-02
(TPY)	2.01E-02	1.92E-02	1.85E-02	1.85E-02

Sources: EPA, 2000 (AP-42)

Table A-17. Design Information and Stack Parameters for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	141.5	135.0	129.1	119.1
Net heat rate (Btu/kWh, LHV)	10,654	10,730	10,866	11,138
(Btu/kWh, HHV)	11,293	11,373	11,518	11,807
Heat Input (MMBtu/hr, LHV)	1,508	1,449	1,403	1,327
(MMBtu/hr, HHV)	1,598	1,536	1,487	1,406
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	3,024,000	2,936,000	2,871,000	2,758,000
- provided	3,024,000	2,936,000	2,871,000	2,758,000
Temperature (°F)	1,121	1,137	1,149	1,166
Moisture (% Vol.)	10.23	10.68	11.06	11.54
Oxygen (% Vol.)	11.22	11.21	11.22	11.25
Molecular Weight	28.44	28.38	28.33	28.27
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,508	1,449	1,403	1,327
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- calculated	81,993	78,784	76,298	72,154
CT Stack				
CT - Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	3,024,000	2,936,000	2,871,000	2,758,000
Temperature (°F)	1,121	1,137	1,149	1,166
Molecular weight	28.44	28.38	28.33	28.27
Volume flow (acfm)- calculated	2,045,011	2,009,479	1,983,445	1,929,486
(ft3/s)- calculated	34,084	33,491	33,057	32,158
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,121	1,137	1,149	1,166
CT volume flow (acfm)	2,045,011	2,009,479	1,983,445	1,929,486
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	103.3	101.5	100.2	97.4

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft²; 14.7 lb/ft³
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000

NSPS Calculation:

Heat Rate at 59oF	10,730	Btu/kWh (LHV)
	11.31970224	kJ/W
	14.4	kJ/W (NSPS)
	75	ppmvd @ 15% O2
	95.40887001	ppmvd @ 15% O2

FAC1 > 1
factor applied to mass flow to obtain emissions' margin

Table A-18. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	17	17	17	17
Emission rate (lb/hr)- provided	17.0	17.0	17.0	17.0
(TPY)	4.3	4.3	4.3	4.3
Sulfur Dioxide (lb/hr) = Natural gas (lb/hr) x sulfur content (%/100) x (lb SO_2 /lb S)				
Fuel Sulfur Content	0.05%	0.05%	0.05%	0.05%
Fuel use (lb/hr)	81,993	78,784	76,298	72,154
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	82.0	78.8	76.3	72.2
(TPY)	20.50	19.70	19.07	18.04
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	42	42	42	42
Moisture (%)	10.23	10.68	11.06	11.54
Oxygen (%)	11.22	11.21	11.22	11.25
Turbine Flow (acfm)	2,045,011	2,009,479	1,983,445	1,929,486
Turbine Exhaust Temperature (°F)	1,121	1,137	1,149	1,166
Emission rate (lb/hr)	262.6	252.6	244.5	231.2
(TPY)	65.7	63.2	61.1	57.8
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	24	24	24	24
Moisture (%)	10.23	10.68	11.06	11.54
Turbine Flow (acfm)	2,045,011	2,009,479	1,983,445	1,929,486
Turbine Exhaust Temperature (°F)	1,121	1,137	1,149	1,166
Emission rate (lb/hr)	64.1	62.1	60.6	58.0
(TPY)	16.0	15.5	15.1	14.5
VOCs (lb/hr) = VOC(ppmvw) x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvw	3.5	3.5	3.5	3.5
Turbine Flow (acfm)	2,045,011	2,009,479	1,983,445	1,929,486
Turbine Exhaust Temperature (°F)	1,121	1,137	1,149	1,166
Emission rate (lb/hr)	5.95	5.79	5.67	5.46
(TPY)	1.5	1.4	1.4	1.4
Lead (lb/hr)= NA				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
Emission rate (lb/hr)	0.0224	0.0215	0.0208	0.0197
(TPY)	0.0056	0.0054	0.0052	0.0049

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 2000 (AP-42)

Table A-19. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
2,3,7,8 TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	3.80E-04	3.80E-04	3.80E-04	3.80E-04
Heat Input Rate (MMBtu/hr)	1.60E+03	1.54E+03	1.49E+03	1.49E+03
Emission Rate (lb/hr)	6.07E-07	5.83E-07	5.65E-07	5.65E-07
(TPY)	1.52E-07	1.46E-07	1.41E-07	1.41E-07
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.31	0.31	0.31	0.31
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	4.95E-04	4.76E-04	4.61E-04	4.61E-04
(TPY)	1.24E-04	1.19E-04	1.15E-04	1.15E-04
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	32.54	32.54	32.54	32.54
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	5.20E-02	5.00E-02	4.84E-02	4.84E-02
(TPY)	1.30E-02	1.25E-02	1.21E-02	1.21E-02
Hydrogen Chloride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (c) , lb/10^{12} Btu	2.11E+02	2.11E+02	2.11E+02	2.11E+02
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	3.38E-01	3.24E-01	3.14E-01	3.14E-01
(TPY)	8.44E-02	8.11E-02	7.85E-02	7.85E-02
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.2	1.2	1.2	1.2
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	1.92E-03	1.84E-03	1.78E-03	1.78E-03
(TPY)	4.79E-04	4.61E-04	4.46E-04	4.46E-04
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	81,993	78,784	76,298	72,154
Sulfur (lb/hr)	41.00	39.39	38.15	36.08
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (d)	5	5	5	5
Emission Rate (lb/hr)	6.28	6.03	5.84	5.52
(TPY)	1.57	1.51	1.46	1.38

Sources: (a) EPA, 2000 (AP-42); (b) EPA, 1981; (c) 4 ppm assumed based on ASTM D2880
(d) assumed based on combustion estimates from GE.

Table A-20. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 75% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Arsenic (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11.0	11.0	11.0	11.0
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	1.76E-02	1.69E-02	1.64E-02	1.64E-02
(TPY)	4.39E-03	4.22E-03	4.09E-03	4.09E-03
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	55.0	55.0	55.0	55.0
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	8.79E-02	8.45E-02	8.18E-02	8.18E-02
(TPY)	2.20E-02	2.11E-02	2.04E-02	2.04E-02
Cadmium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.8	4.8	4.8	4.8
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	7.67E-03	7.37E-03	7.14E-03	7.14E-03
(TPY)	1.92E-03	1.84E-03	1.78E-03	1.78E-03
Chromium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11	11	11	11
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	1.76E-02	1.69E-02	1.64E-02	1.64E-02
(TPY)	4.39E-03	4.22E-03	4.09E-03	4.09E-03
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	280	280	280	280
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	4.47E-01	4.30E-01	4.16E-01	4.16E-01
(TPY)	1.12E-01	1.07E-01	1.04E-01	1.04E-01
Naphthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	35	35	35	35
Heat Input Rate (MMBtu/hr)	1.60E+03	1.54E+03	1.49E+03	1.49E+03
Emission Rate (lb/hr)	5.59E-02	5.37E-02	5.20E-02	5.20E-02
(TPY)	1.40E-02	1.34E-02	1.30E-02	1.30E-02
Manganese (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	790	790	790	790
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	1.26E+00	1.21E+00	1.17E+00	1.17E+00
(TPY)	3.16E-01	3.03E-01	2.94E-01	2.94E-01
Nickel (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.6	4.6	4.6	4.6
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	7.35E-03	7.06E-03	6.84E-03	6.84E-03
(TPY)	1.84E-03	1.77E-03	1.71E-03	1.71E-03
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	16	16	16	16
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	2.56E-02	2.46E-02	2.38E-02	2.38E-02
(TPY)	6.39E-03	6.14E-03	5.95E-03	5.95E-03
Selenium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	25	25	25	25
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	4.00E-02	3.84E-02	3.72E-02	3.72E-02
(TPY)	9.99E-03	9.60E-03	9.29E-03	9.29E-03
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} I				
Basis, lb/10^{12} Btu	40	40	40	40
Heat Input Rate (MMBtu/hr)	1,598	1,536	1,487	1,487
Emission Rate (lb/hr)	6.39E-02	6.14E-02	5.95E-02	5.95E-02
(TPY)	1.60E-02	1.54E-02	1.49E-02	1.49E-02

Sources: EPA, 2000 (AP-42)

Table A-21. Design Information and Stack Parameters for FPL Martin Fort Myers Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	93.8	89.5	85.6	78.9
Net heat rate (Btu/kWh, LHV)	12,685	12,867	13,069	13,453
(Btu/kWh, HHV)	13,446	13,639	13,853	14,260
Heat Input (MMBtu/hr, LHV)	1,190	1,152	1,119	1,062
(MMBtu/hr, HHV)	1,261	1,221	1,186	1,125
Fuel heating value (Btu/lb, LHV)	18,387	18,387	18,387	18,387
(Btu/lb, HHV)	19,490	19,490	19,490	19,490
(HHV/LHV)	1.060	1.060	1.060	1.060
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	2,487,000	2,435,000	2,389,000	2,323,000
- provided	2,487,000	2,435,000	2,389,000	2,323,000
Temperature (°F)	1,168	1,182	1,193	1,200
Moisture (% Vol.)	9.29	9.77	10.17	10.6
Oxygen (% Vol.)	11.76	11.76	11.77	11.86
Molecular Weight	28.51	28.46	28.40	28.34
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,190	1,152	1,119	1,062
Heat content (Btu/lb, LHV)	18,387	18,387	18,387	18,387
Fuel usage (lb/hr)- calculated	64,720	62,637	60,847	57,736
CT Stack				
CT - Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	2,487,000	2,435,000	2,389,000	2,323,000
Temperature (°F)	1,168	1,182	1,193	1,200
Molecular weight	28.51	28.46	28.40	28.34
Volume flow (acfm)- calculated	1,727,369	1,709,200	1,691,211	1,654,983
(ft3/s)- calculated	28,789	28,487	28,187	27,583
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,168	1,182	1,193	1,200
CT volume flow (acfm)	1,727,369	1,709,200	1,691,211	1,654,983
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	87.2	86.3	85.4	83.6

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft²; 14.7 lb/ft³
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000

NSPS Calculation:

Heat Rate at 59oF	12,867	Btu/kWh (LHV)
	13.57438834	kJ/W
	14.4	kJ/W (NSPS)
	75	ppmvd @ 15% O2
	79.56159594	ppmvd @ 15% O2

FAC1 > 1
factor applied to mass flow to obtain emissions' margin

Table A-22. Maximum Emissions for Criteria Pollutants for FPL Martin Fort Myers Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	17	17	17	17
Emission rate (lb/hr)- provided	17.0	17.0	17.0	17.0
(TPY)	4.3	4.3	4.3	4.3
Sulfur Dioxide (lb/hr) = Natural gas (lb/hr) x sulfur content (%/100) x (lb SO_2 /lb S)				
Fuel Sulfur Content	0.05%	0.05%	0.05%	0.05%
Fuel use (lb/hr)	64,720	62,637	60,847	57,736
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	64.7	62.6	60.8	57.7
(TPY)	16.18	15.66	15.21	14.43
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	42	42	42	42
Moisture (%)	9.29	9.77	10.17	10.6
Oxygen (%)	11.76	11.76	11.77	11.86
Turbine Flow (acfm)	1,727,369	1,709,200	1,691,211	1,654,983
Turbine Exhaust Temperature (°F)	1,168	1,182	1,193	1,200
Emission rate (lb/hr)	205.6	198.9	192.9	183.2
(TPY)	51.4	49.7	48.2	45.8
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	35	35	35	35
Moisture (%)	9.29	9.77	10.17	10.6
Turbine Flow (acfm)	1,727,369	1,709,200	1,691,211	1,654,983
Turbine Exhaust Temperature (°F)	1,168	1,182	1,193	1,200
Emission rate (lb/hr)	77.5	75.7	74.0	71.8
(TPY)	19.4	18.9	18.5	18.0
VOCs (lb/hr) = VOC(ppmvw) x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvw	3.5	3.5	3.5	3.5
Turbine Flow (acfm)	1,727,369	1,709,200	1,691,211	1,654,983
Turbine Exhaust Temperature (°F)	1,168	1,182	1,193	1,200
Emission rate (lb/hr)	4.88	4.79	4.71	4.59
(TPY)	1.2	1.2	1.2	1.1
Lead (lb/hr)= NA				
Emission Rate Basis (lb/10^{12} Btu)	14	14	14	14
Emission rate (lb/hr)	0.0177	0.0171	0.0166	0.0158
(TPY)	0.0044	0.0043	0.0042	0.0039

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 2000 (AP-42)

Table A-23. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
2,3,7,8 TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	3.80E-04	3.80E-04	3.80E-04	3.80E-04
Heat Input Rate (MMBtu/hr)	1.26E+03	1.22E+03	1.19E+03	1.19E+03
Emission Rate (lb/hr)	4.79E-07	4.64E-07	4.51E-07	4.51E-07
(TPY)	1.20E-07	1.16E-07	1.13E-07	1.13E-07
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.31	0.31	0.31	0.31
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	3.91E-04	3.78E-04	3.68E-04	3.68E-04
(TPY)	9.78E-05	9.46E-05	9.19E-05	9.19E-05
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	32.54	32.54	32.54	32.54
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	4.10E-02	3.97E-02	3.86E-02	3.86E-02
(TPY)	1.03E-02	9.93E-03	9.65E-03	9.65E-03
Hydrogen Chloride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (c) , lb/10^{12} Btu	2.11E+02	2.11E+02	2.11E+02	2.11E+02
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	2.66E-01	2.58E-01	2.51E-01	2.51E-01
(TPY)	6.66E-02	6.45E-02	6.26E-02	6.26E-02
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.2	1.2	1.2	1.2
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	1.51E-03	1.46E-03	1.42E-03	1.42E-03
(TPY)	3.78E-04	3.66E-04	3.56E-04	3.56E-04
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	64,720	62,637	60,847	57,736
Sulfur (lb/hr)	32.36	31.32	30.42	28.87
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (d)	5	5	5	5
Emission Rate (lb/hr)	4.96	4.80	4.66	4.42
(TPY)	1.24	1.20	1.16	1.11

Sources: (a) EPA, 2000 (AP-42); (b) EPA, 1981; (c) 4 ppm assumed based on ASTM D2880
(d) assumed based on combustion estimates from GE.

Table A-24. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Distillate Oil, 50% Load

Parameter	Turbine Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Arsenic (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11.0	11.0	11.0	11.0
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	1.39E-02	1.34E-02	1.30E-02	1.30E-02
(TPY)	3.47E-03	3.36E-03	3.26E-03	3.26E-03
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	55.0	55.0	55.0	55.0
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	6.94E-02	6.71E-02	6.52E-02	6.52E-02
(TPY)	1.73E-02	1.68E-02	1.63E-02	1.63E-02
Cadmium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.8	4.8	4.8	4.8
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	6.05E-03	5.86E-03	5.69E-03	5.69E-03
(TPY)	1.51E-03	1.46E-03	1.42E-03	1.42E-03
Chromium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	11	11	11	11
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	1.39E-02	1.34E-02	1.30E-02	1.30E-02
(TPY)	3.47E-03	3.36E-03	3.26E-03	3.26E-03
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	280	280	280	280
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	3.53E-01	3.42E-01	3.32E-01	3.32E-01
(TPY)	8.83E-02	8.55E-02	8.30E-02	8.30E-02
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	35	35	35	35
Heat Input Rate (MMBtu/hr)	1.26E+03	1.22E+03	1.19E+03	1.19E+03
Emission Rate (lb/hr)	4.41E-02	4.27E-02	4.15E-02	4.15E-02
(TPY)	1.10E-02	1.07E-02	1.04E-02	1.04E-02
Manganese (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	790	790	790	790
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	9.97E-01	9.64E-01	9.37E-01	9.37E-01
(TPY)	2.49E-01	2.41E-01	2.34E-01	2.34E-01
Nickel (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	4.6	4.6	4.6	4.6
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	5.80E-03	5.62E-03	5.46E-03	5.46E-03
(TPY)	1.45E-03	1.40E-03	1.36E-03	1.36E-03
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	16	16	16	16
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	0.0201824	0.019532832	0.018974848	0.018974848
(TPY)	0.0050456	0.004883208	0.004743712	0.004743712
Selenium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis, lb/10^{12} Btu	25	25	25	25
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	3.15E-02	3.05E-02	2.96E-02	2.96E-02
(TPY)	7.88E-03	7.63E-03	7.41E-03	7.41E-03
Polycyclic Aromatic Hydrocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} I				
Basis, lb/10^{12} Btu	40	40	40	40
Heat Input Rate (MMBtu/hr)	1,261	1,221	1,186	1,186
Emission Rate (lb/hr)	5.05E-02	4.88E-02	4.74E-02	4.74E-02
(TPY)	1.26E-02	1.22E-02	1.19E-02	1.19E-02

Sources: EPA, 2000 (AP-42)

Table A-25. Design Information and Stack Parameters for Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Higher Power Modes

Parameter	Ambient Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Combustion Turbine Performance				
Net power output (MW)	190.3	182.44	174.64	165.54
Net heat rate (Btu/kWh, LHV)	9,080	9,210	9,330	9,482
(Btu/kWh, HHV)	10,079	10,223	10,356	10,525
Heat Input (MMBtu/hr, LHV)	1,728	1,680	1,629	1,570
(MMBtu/hr, HHV)	1,918	1,865	1,809	1,742
Fuel heating value (Btu/lb, LHV)	20,835	20,835	20,835	20,835
(Btu/lb, HHV)	23,127	23,127	23,127	23,127
(HHV/LHV)	1.110	1.110	1.110	1.110
CT Exhaust Flow				
Mass Flow (lb/hr)- with no margin	3,713,000	3,558,000	3,478,000	3,356,000
- provided	3,713,000	3,558,000	3,478,000	3,356,000
Temperature (°F)	1,109	1,130	1,145	1,158
Moisture (% Vol.)	7.74	8.84	9.61	10.73
Oxygen (% Vol.)	12.39	12.15	12.01	11.81
Molecular Weight	28.48	28.36	28.27	28.15
Fuel Usage				
Fuel usage (lb/hr) = Heat Input (MMBtu/hr) x 1,000,000 Btu/MMBtu (Fuel Heat Content, Btu/lb (LHV))				
Heat input (MMBtu/hr, LHV)	1,728	1,680	1,629	1,570
Heat content (Btu/lb, LHV)	20,835	20,835	20,835	20,835
Fuel usage (lb/hr)- calculated	82,933	80,648	78,205	75,335
CT Stack				
CT- Stack height (ft)	80	80	80	80
Diameter (ft)	20.5	20.5	20.5	20.5
Turbine Flow Conditions (CT Stack-Unit 4 only)				
Turbine Flow (acfm) = [(Mass Flow (lb/hr) x 1,545 x (Temp. (°F)+ 460°F)] / [Molecular weight x 2116.8] / 60 min/hr				
Mass flow (lb/hr)	3,713,000	3,558,000	3,478,000	3,356,000
Temperature (°F)	1,109	1,130	1,145	1,158
Molecular weight	28.48	28.36	28.27	28.15
Volume flow (acfm)- calculated	2,488,641	2,426,858	2,402,002	2,346,741
(ft3/s)- calculated	41,477	40,448	40,033	39,112
Stack Flow Conditions				
Velocity (ft/sec) = Volume flow (acfm) / [((diameter)² /4) x 3.14159] / 60 sec/min				
CT Temperature (°F)	1,109	1,130	1,145	1,158
CT volume flow (acfm)	2,488,641	2,426,858	2,402,002	2,346,741
Diameter (ft)	20.5	20.5	20.5	20.5
Velocity (ft/sec)- calculated	125.7	122.5	121.3	118.5

Note: Universal gas constant = 1,545 ft-lb(force)/°R; atmospheric pressure = 2,116.8 lb(force)/ft²; 14.7 lb/ft³
Turbine inlet relative humidity is 20% at 35 °F, 60% at 59 and 75 °F, and 50% at 95 °F.
Source: GE, 2000.

NSPS Calculation:

Heat Rate at 59oF	9,210	Btu/kWh (LHV)
	9.716709603	kJ/W
	14.4	kJ/W (NSPS)
	75	ppmvd @ 15% O2
	111.148737	ppmvd @ 15% O2

FAC1 > 1
factor applied to mass flow to obtain emissions' margin

Table A-26. Maximum Emissions for Criteria Pollutants for FPL Fort Myers Repowering Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Higher Power Modes

Parameter	Ambient Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Particulate (lb/hr) = Emission rate (lb/hr) from manufacturer				
Basis (excludes H_2SO_4), lb/hr	10	10	10	10
Emission rate (lb/hr)- provided	10.0	10.0	10.0	10.0
(TPY)	2.5	2.5	2.5	2.5
Sulfur Dioxide (lb/hr) = Natural gas (cf/hr) x sulfur content(gr/100 cf) x 1 lb/7000 gr x (lb SO_2 /lb S) /100				
Fuel density (lb/ft^3)	0.0448	0.0448	0.0448	0.0448
Fuel use (cf/hr)	1,851,839	1,800,825	1,746,274	1,682,185
Sulfur content (grains/ 100 cf)	1	1	1	1
lb SO_2 /lb S (64/32)	2	2	2	2
Emission rate (lb/hr)	5.3	5.1	5.0	4.8
(TPY)	1.32	1.29	1.25	1.20
Nitrogen Oxides (lb/hr) = NOx(ppm) x {[20.9 x (1 - Moisture(%)/100)] - Oxygen(%)} x 2116.8 x Volume flow (acfm) x 46 (mole. wgt NOx) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 5.9 x 1,000,000 (adj. for ppm)]				
Basis, ppmvd @15% O_2	15	15	15	15
Moisture (%)	7.74	8.84	9.61	10.73
Oxygen (%)	12.39	12.15	12.01	11.81
Turbine Flow (acfm)	2,488,641	2,426,858	2,402,002	2,346,741
Turbine Exhaust Temperature (°F)	1,109	1,130	1,145	1,158
Emission rate (lb/hr)	105.1	101.3	99.0	95.5
(TPY)	26.3	25.3	24.8	23.9
Carbon Monoxide (lb/hr) = CO(ppm) x [1 - Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 28 (mole. wgt CO) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	15	15	15	15
Moisture (%)	7.74	8.84	9.61	10.73
Turbine Flow (acfm)	2,488,641	2,426,858	2,402,002	2,346,741
Turbine Exhaust Temperature (°F)	1,109	1,130	1,145	1,158
Emission rate (lb/hr)	50.5	48.0	46.7	44.7
(TPY)	12.6	12.0	11.7	11.2
VOCs (lb/hr) = VOC(ppmvd) x [1-Moisture(%)/100] x 2116.8 lb/ft2 x Volume flow (acfm) x 16 (mole. wgt as methane) x 60 min/hr / [1545 x (CT temp.(°F) + 460°F) x 1,000,000 (adj. for ppm)]				
Basis, ppmvd	1.5	1.5	1.5	1.5
Moisture (%)	7.74	8.84	9.61	10.73
Turbine Flow (acfm)	2,488,641	2,426,858	2,402,002	2,346,741
Turbine Exhaust Temperature (°F)	1,109	1,130	1,145	1,158
Emission rate (lb/hr)	2.89	2.75	2.67	2.55
(TPY)	0.7	0.7	0.7	0.6
Lead (lb/hr)= NA				
Emission Rate Basis	NA	NA	NA	NA
Emission rate (lb/hr)	NA	NA	NA	NA
(TPY)	NA	NA	NA	NA

Note: ppmvd= parts per million, volume dry; O_2= oxygen.

Source: GE, 2000; Golder Associates, 2000; EPA, 1996

Table A-27. Maximum Emissions for Other Regulated PSD Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Higher Power Modes

Parameter	Ambient Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
2,3,7,8 TCDD Equivalents (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Heat Input Rate (MMBtu/hr)	1.92E+03	1.87E+03	1.81E+03	1.74E+03
Emission Rate (lb/hr)	2.30E-09	2.24E-09	2.17E-09	2.09E-09
(TPY)	5.75E-10	5.60E-10	5.43E-10	5.23E-10
Beryllium (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Fluoride (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (b) , lb/10^{12} Btu	0	0	0	0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	0	0	0	0
(TPY)	0	0	0	0
Mercury (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	7.48E-04	7.48E-04	7.48E-04	7.48E-04
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	1.43E-06	1.40E-06	1.35E-06	1.30E-06
(TPY)	3.59E-07	3.49E-07	3.38E-07	3.26E-07
Sulfuric Acid Mist = Fuel Use (lb/hr) x sulfur (S) content (fraction) x conversion of S to H_2SO_4 (%) x MW H_2SO_4 /MW S (98/32)				
Fuel Usage (cf/hr)	1,851,839	1,800,825	1,746,274	1,682,185
Sulfur (lb/hr)	2.65	2.57	2.49	2.40
lb H_2SO_4 /lb S (98/32)	3.0625	3.0625	3.0625	3.0625
Conversion to H_2SO_4 (%) (c)	5	5	5	5
Emission Rate (lb/hr)	0.41	0.39	0.38	0.37
(TPY)	0.10	0.10	0.10	0.09

Sources: (a) Golder Associates, 2000; (b) EPA, 1981; (c) Assumed.

Note: No Emission Factors for Hydrogen chloride (HCl) from natural gas firing.

Table A-28. Maximum Emissions for Hazardous Air Pollutants for FPL Fort Myers Simple Cycle CT Project
GE Frame 7FA, Dry Low NOx Combustor, Natural Gas, Higher Power Modes

Parameter	Ambient Inlet Temperature 35 °F	59 °F	75 °F	95 °F
Hours of Operation	500	500	500	500
Acetalhyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	40.0	40.0	40.0	40.0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	7.67E-02	7.46E-02	7.23E-02	6.97E-02
(TPY)	1.92E-02	1.87E-02	1.81E-02	1.74E-02
Benzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	12.0	12.0	12.0	12.0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	2.30E-02	2.24E-02	2.17E-02	2.09E-02
(TPY)	5.75E-03	5.60E-03	5.43E-03	5.23E-03
1,3 Butadiene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	0.43	0.43	0.43	0.43
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	8.25E-04	8.02E-04	7.78E-04	7.49E-04
(TPY)	2.06E-04	2.01E-04	1.94E-04	1.87E-04
Acrolein (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	6.4	6.4	6.4	6.4
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	1.23E-02	1.19E-02	1.16E-02	1.12E-02
(TPY)	3.07E-03	2.98E-03	2.89E-03	2.79E-03
Formaldehyde (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	150	150	150	150
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	2.88E-01	2.80E-01	2.71E-01	2.61E-01
(TPY)	7.19E-02	6.99E-02	6.78E-02	6.53E-02
Ethylbenzene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	32.0	32.0	32.0	32.0
Heat Input Rate (MMBtu/hr)	1.92E+03	1.87E+03	1.81E+03	1.74E+03
Emission Rate (lb/hr)	6.14E-02	5.97E-02	5.79E-02	5.58E-02
(TPY)	1.53E-02	1.49E-02	1.45E-02	1.39E-02
Napthalene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	1.3	1.3	1.3	1.3
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	2.49E-03	2.42E-03	2.35E-03	2.26E-03
(TPY)	6.23E-04	6.06E-04	5.88E-04	5.66E-04
Propylene Oxide (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	29.0	29.0	29.0	29.0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	5.56E-02	5.41E-02	5.25E-02	5.05E-02
(TPY)	1.39E-02	1.35E-02	1.31E-02	1.26E-02
Polycyclic Aromatic Hyrdocarbons (PAH) (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} I				
Basis (b) , lb/10^{12} Btu	22	22	22	22
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	4.22E-02	4.10E-02	3.98E-02	3.83E-02
(TPY)	1.05E-02	1.03E-02	9.95E-03	9.58E-03
Xylene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	64.0	64.0	64.0	64.0
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	1.23E-01	1.19E-01	1.16E-01	1.12E-01
(TPY)	3.07E-02	2.98E-02	2.89E-02	2.79E-02
Toluene (lb/hr) = Basis (lb/10^{12} Btu) x Heat Input (MMBtu/hr) / 1,000,000 MMBtu/10^{12} Btu				
Basis (a) , lb/10^{12} Btu	130	130	130	130
Heat Input Rate (MMBtu/hr)	1,918	1,865	1,809	1,742
Emission Rate (lb/hr)	2.49E-01	2.42E-01	2.35E-01	2.26E-01
(TPY)	6.23E-02	6.06E-02	5.88E-02	5.66E-02

Sources: (a) Golder Associates, 2000; (b) EPA, 2000 (AP-42,Table 3.1-4)

APPENDIX B

BUILDING DOWNWASH INFORMATION FROM BPIP

```
'BPIP data for FPL Ft. Myers, Origin Between New HRSG Stacks 3 and 4 5/16/00'
'ST'
'FEET' .3048
'UTMN' -23.
33
'CT1HRSG' 1 0.0
4 86
 -395    10
 -395    78
 -355    78
 -355    10
'CT2HRSG' 1 0.0
4 86
 -245    10
 -245    78
 -205    78
 -205    10
'CT3HRSG' 1 0.0
4 86
  -95    10
  -95    78
  -55    78
  -55    10
'CT4HRSG' 1 0.0
4 86
   55    10
   55    78
   95    78
   95    10
'CT5HRSG' 1 0.0
4 86
  205    10
  205    78
  245    78
  245    10
'CT6HRSG' 1 0.0
4 86
  355    10
  355    78
  395    78
  395    10
'CT1AIRIN' 1 0.0
4 55
 -399   190
 -399   210
 -351   210
 -351   190
'CT2AIRIN' 1 0.0
4 55
 -249   190
 -249   210
 -201   210
 -201   190
'CT3AIRIN' 1 0.0
4 55
  -99   190
  -99   210
  -51   210
  -51   190
'CT4AIRIN' 1 0.0
4 55
   51   190
   51   210
   99   210
   99   190
'CT5AIRIN' 1 0.0
4 55
  201   190
  201   210
  249   210
  249   190
'CT6AIRIN' 1 0.0
4 55
  351   190
  351   210
  399   210
  399   190
```

```
'PROPERTY-CORN' 1 0.0
24 0.0
-2945     625
-2555     565
-2345     415
-2105     355
-1595     445
-1445     385
-1235     445
-1085     475
 -815     475
 -665     415
  445     445
 1375     565
 2035     565
 2215     535
 2365     475
 1915    -755
 1495    -815
 1585   -1265
  415   -1415
  -95   -1535
-2735   -1895
-2765   -1655
-2525   -1025
-3425    -665
'GT12 GENBLD' 1 0.0
4 32
      -310.0  -790.0
      -310.0  -850.0
      -280.0  -850.0
      -280.0  -790.0
'GT11 GENBLD' 1 0.0
4 32
      -385.0  -790.0
      -385.0  -850.0
      -355.0  -850.0
      -355.0  -790.0
'GT10 GENBLD' 1 0.0
4 32
      -460.0  -790.0
      -460.0  -850.0
      -430.0  -850.0
      -430.0  -790.0
'GT9 GENBLD' 1 0.0
4 32
      -535.0  -790.0
      -535.0  -850.0
      -505.0  -850.0
      -505.0  -790.0
'GT8 GENBLD' 1 0.0
4 32
      -610.0  -790.0
      -610.0  -850.0
      -580.0  -850.0
      -580.0  -790.0
'GT7 GENBLD' 1 0.0
4 32
      -685.0  -790.0
      -685.0  -850.0
      -655.0  -850.0
      -655.0  -790.0
'GT6 GENBLD' 1 0.0
4 32
      -310.0  -950.0
      -310.0  -890.0
      -280.0  -890.0
      -280.0  -950.0
'GT5 GENBLD' 1 0.0
4 32
      -385.0  -950.0
      -385.0  -890.0
      -355.0  -890.0
      -355.0  -950.0
'GT4 GENBLD' 1 0.0
4 32
      -460.0  -950.0
```

```
      -460.0  -890.0
      -430.0  -890.0
      -430.0  -950.0
'GT3 GENBLD' 1 0.0
4 32
      -535.0  -950.0
      -535.0  -890.0
      -505.0  -890.0
      -505.0  -950.0
'GT2 GENBLD' 1 0.0
4 32
      -610.0  -950.0
      -610.0  -890.0
      -580.0  -890.0
      -580.0  -950.0
'GT1 GENBLD' 1 0.0
4 32
      -685.0  -950.0
      -685.0  -890.0
      -655.0  -890.0
      -655.0  -950.0
'GT Maintenance Bldg' 1 0.0
4 36
  -875.0  -830.0
  -875.0  -755.0
  -820.0  -755.0
  -820.0  -830.0
'Oil Tank #2' 1 0.0
8 50
    -547.0  -170.0
    -520.6  -106.4
    -457.0   -80.0
    -393.4  -106.4
    -367.0  -170.0
    -393.4  -233.6
    -457.0  -260.0
    -520.6  -233.6
'Oil Tank #1' 1 0.0
8 43
    -524.0  -377.0
    -504.4  -329.6
    -457.0  -310.0
    -409.6  -329.6
    -390.0  -377.0
    -409.6  -424.4
    -457.0  -444.0
    -504.4  -424.4
'CT7AIRIN' 1 0.0
4 55
 -899  -289
 -879  -289
 -879  -241
 -899  -241
'CT7BLDG' 1 0.0
4 22
 -981  -280
 -945  -280
 -945  -250
 -981  -250
'CT8BLDG' 1 0.0
4 22
 -981  -430
 -945  -430
 -945  -400
 -981  -400
'CT8AIRIN' 1 0.0
4 55
 -899  -439
 -879  -439
 -879  -391
 -899  -391
'Cooling Tower' 1 0.0
4 31.00
35      -817
74.13   -785.87
435.19  -1239.79
396.06  -1270.91
```

```
38
' GT#12'  0.0   32.00   -341.0  -765.0
' GT#11'  0.0   32.00   -415.8  -765.0
' GT#10'  0.0   32.00   -491.0  -765.0
' GT#9 '  0.0   32.00   -566.1  -765.0
' GT#8 '  0.0   32.00   -640.9  -765.0
' GT#7 '  0.0   32.00   -695.0  -765.0
' GT#6 '  0.0   32.00   -341.0  -975.0
' GT#5 '  0.0   32.00   -415.8  -975.0
' GT#4 '  0.0   32.00   -491.0  -975.0
' GT#3 '  0.0   32.00   -566.1  -975.0
' GT#2 '  0.0   32.00   -640.9  -975.0
' GT#1 '  0.0   32.00   -695.0  -975.0
'HRSG1 '  0.0  125.00   -375.0     0.0
'HRSG2 '  0.0  125.00   -225.0     0.0
'HRSG3 '  0.0  125.00    -75.0     0.0
'HRSG4 '  0.0  125.00     75.0     0.0
'HRSG5 '  0.0  125.00    225.0     0.0
'HRSG6 '  0.0  125.00    375.0     0.0
'  CT1 '  0.0   98.00   -375.0   120.0
'  CT2 '  0.0   98.00   -225.0   120.0
'  CT3 '  0.0   98.00    -75.0   120.0
'  CT4 '  0.0   98.00     75.0   120.0
'  CT5 '  0.0   98.00    225.0   120.0
'  CT6 '  0.0   98.00    375.0   120.0
'  CT7 '  0.0   80.00  -1010.0  -265.0
'  CT8 '  0.0   80.00  -1010.0  -415.0
'cool01'  0.0   45.00   77.6    -830.4
'cool02'  0.0   45.00   106.23  -866.4
'cool03'  0.0   45.00   134.87  -902.4
'cool04'  0.0   45.00   163.51  -938.4
'cool05'  0.0   45.00   192.14  -974.4
'cool06'  0.0   45.00   220.78  -1010.4
'cool07'  0.0   45.00   249.41  -1046.4
'cool08'  0.0   45.00   278.05  -1082.4
'cool09'  0.0   45.00   306.68  -1118.4
'cool10'  0.0   45.00   335.32  -1154.4
'cool11'  0.0   45.00   363.96  -1190.4
'cool12'  0.0   45.00   392.59  -1226.4
0
```

BPIP (Dated: 95086)
DATE : 05/16/00
TIME : 10:06:31
BPIP data for FPL Ft. Myers, Origin Between New HRSG Stacks 3 and 4 5/16/00

============================
BPIP PROCESSING INFORMATION:
============================

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in FEET will be converted to meters using
a conversion factor of 0.3048. Output will be in meters.

UTMP is set to UTMN. The input is assumed to be in a local
X-Y coordinate system as opposed to a UTM coordinate system.
True North is in the positive Y direction.

Plant north is set to -23.00 degrees with respect to True North.

BPIP data for FPL Ft. Myers, Origin Between New HRSG Stacks 3 and 4 5/16/00

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
GT#12	9.75	0.00	24.38	65.00
GT#11	9.75	0.00	24.38	65.00
GT#10	9.75	0.00	24.38	65.00
GT#9	9.75	0.00	24.38	65.00
GT#8	9.75	0.00	27.43	65.00
GT#7	9.75	0.00	27.43	65.00
GT#6	9.75	0.00	24.38	65.00
GT#5	9.75	0.00	24.38	65.00
GT#4	9.75	0.00	24.38	65.00
GT#3	9.75	0.00	24.38	65.00
GT#2	9.75	0.00	24.38	65.00
GT#1	9.75	0.00	24.38	65.00
HRSG1	38.10	0.00	62.28	65.00
HRSG2	38.10	0.00	62.28	65.00
HRSG3	38.10	0.00	62.28	65.00
HRSG4	38.10	0.00	62.28	65.00
HRSG5	38.10	0.00	62.28	65.00
HRSG6	38.10	0.00	62.28	65.00
CT1	29.87	0.00	62.28	65.00
CT2	29.87	0.00	62.28	65.00
CT3	29.87	0.00	62.28	65.00
CT4	29.87	0.00	62.28	65.00
CT5	29.87	0.00	62.28	65.00
CT6	29.87	0.00	62.28	65.00
CT7	24.38	0.00	40.13	65.00
CT8	24.38	0.00	40.13	65.00
cool01	13.72	0.00	23.62	65.00
cool02	13.72	0.00	23.62	65.00
cool03	13.72	0.00	23.62	65.00
cool04	13.72	0.00	23.62	65.00
cool05	13.72	0.00	23.62	65.00
cool06	13.72	0.00	23.62	65.00
cool07	13.72	0.00	23.62	65.00
cool08	13.72	0.00	23.62	65.00
cool09	13.72	0.00	23.62	65.00
cool10	13.72	0.00	23.62	65.00
cool11	13.72	0.00	23.62	65.00
cool12	13.72	0.00	23.62	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP
Technical Support Document. Determinant 3 may be investigated for
additional stack height credit. Final values result after

Determinant 3 has been taken into consideration.
** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 95086)

DATE : 05/16/00
TIME : 10:06:31

BPIP data for FPL Ft. Myers, Origin Between New HRSG Stacks 3 and 4 5/16/00

BPIP output is in meters

```
    SO BUILDHGT  GT#12     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#12     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#12     9.75    9.75    0.00    9.75    9.75    9.75
    SO BUILDHGT  GT#12     9.75    9.75    9.75    9.75    9.75    0.00
    SO BUILDHGT  GT#12     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#12     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDWID  GT#12    17.63   19.16   20.11   20.45   20.16   19.27
    SO BUILDWID  GT#12     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#12    16.45   14.09    0.00   10.09   13.02   15.56
    SO BUILDWID  GT#12    17.63   19.16   20.11   20.45   20.16    0.00
    SO BUILDWID  GT#12     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#12    16.45   14.09   11.30   10.09   13.02   15.56

    SO BUILDHGT  GT#11     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#11     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#11     9.75    9.75    0.00    9.75    9.75    9.75
    SO BUILDHGT  GT#11     9.75    9.75    9.75    9.75    9.75    0.00
    SO BUILDHGT  GT#11     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#11     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDWID  GT#11    17.63   19.16   20.11   20.45   20.16   19.27
    SO BUILDWID  GT#11     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#11    16.45   14.09    0.00   10.09   13.02   15.56
    SO BUILDWID  GT#11    17.63   19.16   20.11   20.45   20.16    0.00
    SO BUILDWID  GT#11     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#11    16.45   14.09   11.30   10.09   13.02   15.56

    SO BUILDHGT  GT#10     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#10     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#10     9.75    9.75    0.00    9.75    9.75    9.75
    SO BUILDHGT  GT#10     9.75    9.75    9.75    9.75    9.75    0.00
    SO BUILDHGT  GT#10     0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#10     9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDWID  GT#10    17.63   19.16   20.11   20.45   20.16   19.27
    SO BUILDWID  GT#10     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#10    16.45   14.09    0.00   10.09   13.02   15.56
    SO BUILDWID  GT#10    17.63   19.16   20.11   20.45   20.16    0.00
    SO BUILDWID  GT#10     0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#10    16.45   14.09   11.30   10.09   13.02   15.56

    SO BUILDHGT  GT#9      9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#9      0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#9      9.75    9.75    0.00    9.75    9.75    9.75
    SO BUILDHGT  GT#9      9.75    9.75    9.75    9.75    9.75    0.00
    SO BUILDHGT  GT#9      0.00    9.75    9.75    9.75    9.75    9.75
    SO BUILDHGT  GT#9      9.75    9.75    9.75    9.75    9.75    9.75
    SO BUILDWID  GT#9     17.63   19.16   20.11   20.45   20.16   19.27
    SO BUILDWID  GT#9      0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#9     16.45   14.09    0.00   10.09   13.02   15.56
    SO BUILDWID  GT#9     17.63   19.16   20.11   20.45   20.16    0.00
    SO BUILDWID  GT#9      0.00   19.88   20.41   20.32   19.61   18.31
    SO BUILDWID  GT#9     16.45   14.09   11.30   10.09   13.02   15.56
```

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SO BUILDHGT  GT#8     9.75   9.75   9.75   9.75  10.97  10.97
SO BUILDHGT  GT#8    10.97   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#8     9.75   9.75   0.00   9.75   9.75   9.75
SO BUILDHGT  GT#8     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#8     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#8     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDWID  GT#8    17.63  19.16  20.11  20.45  26.76  24.73
SO BUILDWID  GT#8    23.71  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#8    16.45  14.09   0.00  10.09  13.02  15.56
SO BUILDWID  GT#8    17.63  19.16  20.11  20.45  20.16   0.00
SO BUILDWID  GT#8     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#8    16.45  14.09  11.30  10.09  13.02  15.56

SO BUILDHGT  GT#7     0.00   0.00   0.00  10.97  10.97  10.97
SO BUILDHGT  GT#7    10.97   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#7     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#7     0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDHGT  GT#7     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#7     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDWID  GT#7     0.00   0.00   0.00  27.98  26.76  24.73
SO BUILDWID  GT#7    23.71  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#7    16.45  14.09  11.30  10.09  13.02   0.00
SO BUILDWID  GT#7     0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID  GT#7     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#7    16.45  14.09  11.30  10.09  13.02   0.00

SO BUILDHGT  GT#6     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#6     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#6     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#6     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#6     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#6     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDWID  GT#6    17.63  19.16  20.11  20.45  20.16   0.00
SO BUILDWID  GT#6     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#6    16.45  14.09  11.30  10.09  13.02  15.56
SO BUILDWID  GT#6    17.63  19.16  20.11  20.45  20.16   0.00
SO BUILDWID  GT#6     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#6    16.45  14.09  11.30  10.09  13.02  15.56

SO BUILDHGT  GT#5     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#5     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#5     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#5     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#5     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#5     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDWID  GT#5    17.63  19.16  20.11  20.45  20.16   0.00
SO BUILDWID  GT#5     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#5    16.45  14.09  11.30  10.09  13.02  15.56
SO BUILDWID  GT#5    17.63  19.16  20.11  20.45  20.16  19.27
SO BUILDWID  GT#5     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#5    16.45  14.09  11.30  10.09  13.02  15.56

SO BUILDHGT  GT#4     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#4     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#4     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#4     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#4     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#4     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDWID  GT#4    17.63  19.16  20.11  20.45  20.16   0.00
SO BUILDWID  GT#4     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#4    16.45  14.09  11.30  10.09  13.02  15.56
SO BUILDWID  GT#4    17.63  19.16  20.11  20.45  20.16  19.27
SO BUILDWID  GT#4     0.00  19.88  20.41  20.32  19.61  18.31
SO BUILDWID  GT#4    16.45  14.09  11.30  10.09  13.02  15.56

SO BUILDHGT  GT#3     9.75   9.75   9.75   9.75   9.75   0.00
SO BUILDHGT  GT#3     0.00   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#3     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#3     9.75   9.75   9.75   9.75   9.75   9.75
SO BUILDHGT  GT#3     0.00   9.75   9.75   9.75   9.75   9.75
```

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SO BUILDHGT  GT#3      9.75    9.75    9.75    9.75    9.75    9.75
SO BUILDWID  GT#3     17.63   19.16   20.11   20.45   20.16    0.00
SO BUILDWID  GT#3      0.00   19.88   20.41   20.32   19.61   18.31
SO BUILDWID  GT#3     16.45   14.09   11.30   10.09   13.02   15.56
SO BUILDWID  GT#3     17.63   19.16   20.11   20.45   20.16   19.27
SO BUILDWID  GT#3      0.00   19.88   20.41   20.32   19.61   18.31
SO BUILDWID  GT#3     16.45   14.09   11.30   10.09   13.02   15.56

SO BUILDHGT  GT#2      9.75    9.75    9.75    9.75    9.75    0.00
SO BUILDHGT  GT#2      0.00    9.75    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#2      9.75    9.75    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#2      9.75    9.75    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#2      0.00    9.75    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#2      9.75    9.75    9.75    9.75    9.75    9.75
SO BUILDWID  GT#2     17.63   19.16   20.11   20.45   20.16    0.00
SO BUILDWID  GT#2      0.00   19.88   20.41   20.32   19.61   18.31
SO BUILDWID  GT#2     16.45   14.09   11.30   10.09   13.02   15.56
SO BUILDWID  GT#2     17.63   19.16   20.11   20.45   20.16   19.27
SO BUILDWID  GT#2      0.00   19.88   20.41   20.32   19.61   18.31
SO BUILDWID  GT#2     16.45   14.09   11.30   10.09   13.02   15.56

SO BUILDHGT  GT#1      9.75    9.75    9.75    9.75    9.75    0.00
SO BUILDHGT  GT#1      0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT  GT#1      0.00    0.00    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#1      9.75    9.75    9.75    9.75    9.75    9.75
SO BUILDHGT  GT#1      0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT  GT#1      0.00    0.00    9.75    9.75    9.75    9.75
SO BUILDWID  GT#1     17.63   19.16   20.11   20.45   20.16    0.00
SO BUILDWID  GT#1      0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID  GT#1      0.00    0.00   11.30   10.09   13.02   15.56
SO BUILDWID  GT#1     17.63   19.16   20.11   20.45   20.16   19.27
SO BUILDWID  GT#1      0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID  GT#1      0.00    0.00   11.30   10.09   13.02   15.56

SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG1     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDWID HRSG1     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG1     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG1     20.27   17.72   14.63   13.26   16.54   19.32
SO BUILDWID HRSG1     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG1     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG1     20.27   17.72   14.63   13.26   16.54   19.32

SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG2     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDWID HRSG2     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG2     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG2     20.27   17.72   14.63   13.26   16.54   19.32
SO BUILDWID HRSG2     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG2     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG2     20.27   17.72   14.63   13.26   16.54   19.32

SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDHGT HRSG3     26.21   26.21   26.21   26.21   26.21   26.21
SO BUILDWID HRSG3     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG3     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG3     20.27   17.72   14.63   13.26   16.54   19.32
SO BUILDWID HRSG3     21.51   23.05   23.89   24.00   23.39   22.06
SO BUILDWID HRSG3     21.34   22.94   23.84   24.02   23.47   22.21
SO BUILDWID HRSG3     20.27   17.72   14.63   13.26   16.54   19.32
```

SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG4	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDWID	HRSG4	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG4	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG4	20.27	17.72	14.63	13.26	16.54	19.32
SO	BUILDWID	HRSG4	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG4	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG4	20.27	17.72	14.63	13.26	16.54	19.32

SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG5	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDWID	HRSG5	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG5	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG5	20.27	17.72	14.63	13.26	16.54	19.32
SO	BUILDWID	HRSG5	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG5	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG5	20.27	17.72	14.63	13.26	16.54	19.32

SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	HRSG6	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDWID	HRSG6	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG6	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG6	20.27	17.72	14.63	13.26	16.54	19.32
SO	BUILDWID	HRSG6	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	HRSG6	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	HRSG6	20.27	17.72	14.63	13.26	16.54	19.32

SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	0.00
SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	0.00
SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT1	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDWID	CT1	21.51	23.05	23.89	24.00	23.39	0.00
SO	BUILDWID	CT1	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	CT1	20.27	17.72	14.63	13.26	16.54	19.32
SO	BUILDWID	CT1	21.51	23.05	23.89	24.00	23.39	0.00
SO	BUILDWID	CT1	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	CT1	20.27	17.72	14.63	13.26	16.54	19.32

SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT2	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDWID	CT2	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	CT2	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	CT2	20.27	17.72	14.63	13.26	16.54	19.32
SO	BUILDWID	CT2	21.51	23.05	23.89	24.00	23.39	22.06
SO	BUILDWID	CT2	21.34	22.94	23.84	24.02	23.47	22.21
SO	BUILDWID	CT2	20.27	17.72	14.63	13.26	16.54	19.32

SO	BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21
SO	BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21

SO BUILDHGT	CT3	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDWID	CT3	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT3	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT3	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDWID	CT3	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT3	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT3	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT4	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDWID	CT4	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT4	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT4	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDWID	CT4	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT4	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT4	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT5	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDWID	CT5	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT5	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT5	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDWID	CT5	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT5	21.34	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT5	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDHGT	CT6	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT6	0.00	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT6	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT6	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT6	0.00	26.21	26.21	26.21	26.21	26.21
SO BUILDHGT	CT6	26.21	26.21	26.21	26.21	26.21	26.21
SO BUILDWID	CT6	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT6	0.00	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT6	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDWID	CT6	21.51	23.05	23.89	24.00	23.39	22.06
SO BUILDWID	CT6	0.00	22.94	23.84	24.02	23.47	22.21
SO BUILDWID	CT6	20.27	17.72	14.63	13.26	16.54	19.32
SO BUILDHGT	CT7	0.00	6.71	6.71	6.71	16.76	6.71
SO BUILDHGT	CT7	6.71	6.71	16.76	6.71	6.71	0.00
SO BUILDHGT	CT7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	CT7	0.00	6.71	6.71	6.71	16.76	16.76
SO BUILDHGT	CT7	16.76	16.76	16.76	6.71	16.76	16.76
SO BUILDHGT	CT7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	CT7	0.00	14.26	13.91	13.13	15.58	10.41
SO BUILDWID	CT7	9.71	11.38	15.58	13.65	14.17	0.00
SO BUILDWID	CT7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	CT7	0.00	14.26	13.91	13.13	15.58	15.26
SO BUILDWID	CT7	14.93	15.58	15.58	13.65	14.86	13.67
SO BUILDWID	CT7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	CT8	0.00	6.71	6.71	6.71	16.76	6.71
SO BUILDHGT	CT8	6.71	6.71	16.76	6.71	6.71	0.00
SO BUILDHGT	CT8	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	CT8	16.76	16.76	16.76	6.71	16.76	16.76
SO BUILDHGT	CT8	16.76	16.76	16.76	6.71	6.71	0.00
SO BUILDHGT	CT8	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	CT8	0.00	14.26	13.91	13.13	15.58	10.41
SO BUILDWID	CT8	9.71	11.38	15.58	13.65	14.17	0.00
SO BUILDWID	CT8	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	CT8	13.08	14.44	15.35	13.13	15.58	15.26
SO BUILDWID	CT8	14.93	15.58	15.58	13.65	14.17	0.00
SO BUILDWID	CT8	0.00	0.00	0.00	0.00	0.00	0.00

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SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool01     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool01   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool01   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool01    50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool01   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool01   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool01    50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool02     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool02   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool02   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool02    50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool02   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool02   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool02    50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool03     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool03   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool03   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool03    50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool03   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool03   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool03    50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool04     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool04   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool04   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool04    50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool04   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool04   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool04    50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool05     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool05   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool05   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool05    50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool05   172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool05   142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool05    50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool06     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool06     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool06     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool06     9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool06     9.45    9.45    9.45    9.45    9.45    9.45
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SO BUILDHGT cool06      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool06    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool06    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool06     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool06    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool06    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool06     50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool07      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool07    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool07    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool07     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool07    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool07    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool07     50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool08      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool08    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool08    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool08     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool08    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool08    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool08     50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool09      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool09    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool09    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool09     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool09    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool09    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool09     50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool10      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool10    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool10    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool10     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool10    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool10    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool10     50.18   78.97  105.36  128.56  147.84  162.63

SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool11      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool11    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool11    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool11     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool11    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool11    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool11     50.18   78.97  105.36  128.56  147.84  162.63
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SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDHGT cool12      9.45    9.45    9.45    9.45    9.45    9.45
SO BUILDWID cool12    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool12    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool12     50.18   78.97  105.36  128.56  147.84  162.63
SO BUILDWID cool12    172.49  177.10  177.12  176.27  170.07  158.70
SO BUILDWID cool12    142.50  121.98   97.75   70.55   41.20   19.86
SO BUILDWID cool12     50.18   78.97  105.36  128.56  147.84  162.63
```

APPENDIX C

DETAILED SUMMARY OF ISCST MODEL RESULTS

ISCBOB3 RELEASE 98056

ISCST3 OUTPUT FILE NUMBER 1 :GENNGC2.087
ISCST3 OUTPUT FILE NUMBER 2 :GENNGC2.088
ISCST3 OUTPUT FILE NUMBER 3 :GENNGC2.089
ISCST3 OUTPUT FILE NUMBER 4 :GENNGC2.090
ISCST3 OUTPUT FILE NUMBER 5 :GENNGC2.091
First title for last output file is: 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS 7/14/00
Second title for last output file is: SIGNIFICANT IMPACT ANALYSIS, SITE VICINITY, GENERIC 10G/S, NAT. GAS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	BASE35				
Annual					
	1987	0.01146	200.	16000.	87123124
	1988	0.01302	240.	16000.	88123124
	1989	0.01028	300.	14000.	89123124
	1990	0.01917	240.	16000.	90123124
	1991	0.01367	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.24959	250.	8000.	87081824
	1988	0.20649	180.	20000.	88121824
	1989	0.13791	190.	12000.	89012424
	1990	0.18432	230.	6000.	90051124
	1991	0.16110	250.	18000.	91111424
HIGH 8-Hour					
	1987	0.41591	250.	20000.	87081808
	1988	0.41353	180.	18000.	88121808
	1989	0.36656	140.	20000.	89012308
	1990	0.44932	300.	20000.	90022208
	1991	0.40785	250.	20000.	91113008
HIGH 3-Hour					
	1987	0.77435	210.	18000.	87110706
	1988	0.79695	260.	20000.	88091703
	1989	0.63749	260.	1500.	89073115
	1990	0.88450	180.	2000.	90041815
	1991	0.84738	180.	2000.	91081615
HIGH 1-Hour					
	1987	1.96541	10.	1500.	87070612
	1988	1.91011	40.	1500.	88060513
	1989	1.91181	260.	1500.	89073114
	1990	1.91188	50.	1500.	90062013
	1991	2.04240	60.	1500.	91041513
SOURCE GROUP ID:	BASE59				
Annual					
	1987	0.01178	200.	16000.	87123124
	1988	0.01332	240.	16000.	88123124
	1989	0.01058	300.	14000.	89123124
	1990	0.01970	240.	16000.	90123124
	1991	0.01393	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.25263	250.	8000.	87081824
	1988	0.21049	180.	20000.	88121824
	1989	0.14001	190.	12000.	89012424
	1990	0.18626	230.	6000.	90051124
	1991	0.22163	60.	6000.	91070224
HIGH 8-Hour					
	1987	0.42506	250.	20000.	87081808
	1988	0.42150	180.	18000.	88121808
	1989	0.37440	140.	20000.	89012308
	1990	0.45802	300.	20000.	90022208
	1991	0.46694	60.	5000.	91070216
HIGH 3-Hour					
	1987	0.78895	210.	18000.	87110706
	1988	0.81247	260.	20000.	88091703
	1989	0.69461	40.	1500.	89061115
	1990	0.88721	180.	2000.	90041815
	1991	0.84902	180.	2000.	91081615
HIGH 1-Hour					
	1987	2.09957	160.	1500.	87080314
	1988	2.08112	230.	1500.	88081714
	1989	2.08384	40.	1500.	89061114
	1990	1.91831	50.	1500.	90062013
	1991	2.04864	60.	1500.	91041513
SOURCE GROUP ID:	BASE95				

Annual					
	1987	0.01255	200.	14000.	87123124
	1988	0.01427	240.	14000.	88123124
	1989	0.01124	300.	12000.	89123124
	1990	0.02102	240.	14000.	90123124
	1991	0.01491	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.30424	250.	8000.	87081824
	1988	0.22016	180.	20000.	88121824
	1989	0.16816	310.	14000.	89091224
	1990	0.19135	230.	6000.	90051124
	1991	0.22297	60.	6000.	91070224
HIGH 8-Hour					
	1987	0.52714	250.	6000.	87081816
	1988	0.44068	180.	18000.	88121808
	1989	0.39348	140.	20000.	89012308
	1990	0.47923	300.	20000.	90022208
	1991	0.46881	60.	5000.	91070216
HIGH 3-Hour					
	1987	0.82439	210.	18000.	87110706
	1988	0.85043	260.	20000.	88091703
	1989	0.73578	270.	1500.	89060212
	1990	0.89368	180.	2000.	90041815
	1991	0.85297	180.	2000.	91081615
HIGH 1-Hour					
	1987	2.20332	80.	1500.	87062213
	1988	2.09815	230.	1500.	88081714
	1989	2.20735	270.	1500.	89060211
	1990	2.18674	180.	1500.	90090912
	1991	2.16289	210.	1500.	91072614
SOURCE GROUP ID:	LD7535				
Annual					
	1987	0.01428	200.	14000.	87123124
	1988	0.01632	240.	14000.	88123124
	1989	0.01355	300.	10000.	89123124
	1990	0.02416	240.	14000.	90123124
	1991	0.01739	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.32366	250.	8000.	87081824
	1988	0.24544	180.	18000.	88121824
	1989	0.19138	320.	8000.	89091424
	1990	0.20512	230.	6000.	90051124
	1991	0.25087	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.55261	250.	6000.	87081816
	1988	0.48610	180.	16000.	88121808
	1989	0.44216	320.	8000.	89091416
	1990	0.52973	300.	18000.	90022208
	1991	0.64508	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.86853	210.	20000.	87110706
	1988	0.94123	260.	20000.	88091703
	1989	0.81760	50.	1500.	89072812
	1990	1.36824	50.	1500.	90090812
	1991	0.88472	180.	1500.	91081615
HIGH 1-Hour					
	1987	2.49150	20.	1500.	87092013
	1988	2.47138	230.	1500.	88080912
	1989	2.45281	50.	1500.	89072812
	1990	2.43161	50.	1500.	90090811
	1991	2.36237	330.	1500.	91072212
SOURCE GROUP ID:	LD7559				
Annual					
	1987	0.01449	200.	14000.	87123124
	1988	0.01659	240.	14000.	88123124
	1989	0.01369	300.	10000.	89123124
	1990	0.02453	240.	14000.	90123124
	1991	0.01757	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.32565	250.	8000.	87081824
	1988	0.24794	180.	18000.	88121824
	1989	0.19251	320.	8000.	89091424
	1990	0.20656	230.	6000.	90051124
	1991	0.25175	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.55527	250.	6000.	87081816
	1988	0.49109	180.	16000.	88121808

	1989	0.44422	320.	6000.	89091416
	1990	0.53510	300.	18000.	90022208
	1991	0.64735	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.87703	210.	20000.	87110706
	1988	0.95031	260.	20000.	88091703
	1989	0.81896	50.	1500.	89072812
	1990	1.37024	50.	1500.	90090812
	1991	0.88892	180.	1500.	91081615
HIGH 1-Hour					
	1987	2.57880	20.	1500.	87092113
	1988	2.47540	230.	1500.	88080912
	1989	2.45689	50.	1500.	89072812
	1990	2.57189	80.	1500.	90082212
	1991	2.46086	300.	1500.	91090112
SOURCE GROUP ID:	LD7595				
Annual					
	1987	0.01500	200.	14000.	87123124
	1988	0.01742	240.	14000.	88123124
	1989	0.01420	300.	10000.	89123124
	1990	0.02551	240.	14000.	90123124
	1991	0.01819	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.33177	250.	8000.	87081824
	1988	0.25543	180.	18000.	88121824
	1989	0.19645	310.	12000.	89091224
	1990	0.21106	230.	6000.	90051124
	1991	0.25448	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.56357	250.	6000.	87081816
	1988	0.50599	180.	16000.	88121808
	1989	0.45799	140.	20000.	89012308
	1990	0.55138	300.	18000.	90022208
	1991	0.65439	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.90319	210.	18000.	87110706
	1988	0.97790	260.	20000.	88091703
	1989	0.87816	180.	1500.	89061115
	1990	1.37680	50.	1500.	90090812
	1991	0.90844	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.66102	50.	1500.	87080313
	1988	2.62463	10.	1500.	88081713
	1989	2.63449	180.	1500.	89061113
	1990	2.65241	250.	1500.	90100112
	1991	2.64971	160.	1500.	91091311
SOURCE GROUP ID:	LD5035				
Annual					
	1987	0.01697	200.	12000.	87123124
	1988	0.01927	240.	12000.	88123124
	1989	0.01576	240.	12000.	89123124
	1990	0.02863	240.	14000.	90123124
	1991	0.02046	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.35193	250.	8000.	87081824
	1988	0.28295	180.	16000.	88121824
	1989	0.24988	230.	1500.	89073024
	1990	0.22856	240.	16000.	90121424
	1991	0.26350	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.59136	250.	6000.	87081816
	1988	0.55207	180.	16000.	88121808
	1989	0.74960	230.	1500.	89073016
	1990	0.60279	300.	18000.	90022208
	1991	0.67757	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.98746	190.	18000.	87100506
	1988	1.07004	260.	18000.	88091703
	1989	1.49920	230.	1500.	89073015
	1990	1.40171	50.	1500.	90090812
	1991	1.00454	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.91234	200.	1500.	87091412
	1988	2.73264	310.	1500.	88071812
	1989	2.88139	50.	1500.	89051611
	1990	2.89973	80.	1500.	90070412
	1991	2.84672	240.	1500.	91091913

SOURCE GROUP ID: LD5059

Annual					
	1987	0.01725	200.	12000.	87123124
	1988	0.01964	240.	12000.	88123124
	1989	0.01585	240.	12000.	89123124
	1990	0.02881	240.	14000.	90123124
	1991	0.02070	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.35326	250.	8000.	87081824
	1988	0.28462	180.	16000.	88121824
	1989	0.25018	230.	1500.	89073024
	1990	0.26294	230.	6000.	90051124
	1991	0.26407	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.59315	250.	6000.	87081816
	1988	0.55529	180.	16000.	88121808
	1989	0.75048	230.	1500.	89073016
	1990	0.61973	230.	6000.	90051116
	1991	0.67905	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.99315	190.	18000.	87100506
	1988	1.07610	260.	18000.	88091703
	1989	1.50096	230.	1500.	89073015
	1990	1.40347	50.	1500.	90090812
	1991	1.01100	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.91490	200.	1500.	87091412
	1988	2.94588	280.	1500.	88072612
	1989	2.88393	50.	1500.	89051611
	1990	2.90220	80.	1500.	90070412
	1991	2.84910	240.	1500.	91091913

SOURCE GROUP ID: LD5095

Annual					
	1987	0.01787	200.	12000.	87123124
	1988	0.02031	240.	12000.	88123124
	1989	0.01645	240.	12000.	89123124
	1990	0.03000	240.	12000.	90123124
	1991	0.02145	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.36043	250.	8000.	87081824
	1988	0.29306	180.	16000.	88121824
	1989	0.25181	230.	1500.	89073024
	1990	0.26830	230.	6000.	90051124
	1991	0.26720	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.60293	250.	6000.	87081816
	1988	0.57162	180.	14000.	88121808
	1989	0.75539	230.	1500.	89073016
	1990	0.63213	230.	6000.	90051116
	1991	0.68709	170.	1500.	91081616
HIGH 3-Hour					
	1987	1.02361	190.	16000.	87100506
	1988	1.06357	260.	20000.	88091703
	1989	1.51077	230.	1500.	89073015
	1990	1.41324	50.	1500.	90090812
	1991	1.04477	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.92870	200.	1500.	87091412
	1988	2.95958	280.	1500.	88072612
	1989	2.90680	230.	1500.	89081712
	1990	2.91561	80.	1500.	90070412
	1991	2.99581	360.	1500.	91041913

SOURCE GROUP ID: HPM35

Annual					
	1987	0.01123	200.	16000.	87123124
	1988	0.01282	240.	16000.	88123124
	1989	0.01010	300.	14000.	89123124
	1990	0.01886	240.	16000.	90123124
	1991	0.01347	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.24729	250.	8000.	87081824
	1988	0.20363	180.	20000.	88121824
	1989	0.13638	190.	12000.	89012424
	1990	0.18288	230.	6000.	90051124
	1991	0.15902	250.	18000.	91111424
HIGH 8-Hour					
	1987	0.40900	250.	20000.	87081808

	1988	0.40784	180.	18000.	88121808
	1989	0.36089	140.	20000.	89012308
	1990	0.44283	300.	20000.	90022208
	1991	0.40148	250.	20000.	91113008
HIGH 3-Hour					
	1987	0.76355	210.	18000.	87110706
	1988	0.78523	260.	20000.	88091703
	1989	0.63591	260.	1500.	89073115
	1990	0.88239	180.	2000.	90041815
	1991	0.84607	180.	2000.	91081615
HIGH 1-Hour					
	1987	1.96065	10.	1500.	87070612
	1988	1.90443	40.	1500.	88060513
	1989	1.90711	260.	1500.	89073114
	1990	1.90714	50.	1500.	90062013
	1991	1.96586	250.	1500.	91062813
SOURCE GROUP ID:	HPM59				
Annual					
	1987	0.01149	200.	16000.	87123124
	1988	0.01307	240.	16000.	88123124
	1989	0.01030	300.	14000.	89123124
	1990	0.01922	240.	16000.	90123124
	1991	0.01370	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.24987	250.	8000.	87081824
	1988	0.20707	180.	20000.	88121824
	1989	0.13818	190.	12000.	89012424
	1990	0.18448	230.	6000.	90051124
	1991	0.16141	250.	18000.	91111424
HIGH 8-Hour					
	1987	0.41683	250.	20000.	87081808
	1988	0.41471	180.	18000.	88121808
	1989	0.36762	140.	20000.	89012308
	1990	0.45031	300.	20000.	90022208
	1991	0.40881	250.	20000.	91113008
HIGH 3-Hour					
	1987	0.77612	210.	18000.	87110706
	1988	0.79856	260.	20000.	88091703
	1989	0.63767	260.	1500.	89073115
	1990	0.88474	180.	2000.	90041815
	1991	0.84751	180.	2000.	91081615
HIGH 1-Hour					
	1987	1.96595	10.	1500.	87070612
	1988	2.07526	230.	1500.	88081714
	1989	1.91233	260.	1500.	89073114
	1990	1.91239	50.	1500.	90062013
	1991	2.04296	60.	1500.	91041513
SOURCE GROUP ID:	HPM95				
Annual					
	1987	0.01184	200.	16000.	87123124
	1988	0.01339	240.	16000.	88123124
	1989	0.01063	300.	14000.	89123124
	1990	0.01980	240.	16000.	90123124
	1991	0.01414	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.25332	250.	8000.	87081824
	1988	0.21162	180.	20000.	88121824
	1989	0.14057	190.	12000.	89012424
	1990	0.18669	230.	6000.	90051124
	1991	0.22173	60.	6000.	91070224
HIGH 8-Hour					
	1987	0.42721	250.	20000.	87081808
	1988	0.42377	180.	18000.	88121808
	1989	0.37653	140.	20000.	89012308
	1990	0.46018	300.	20000.	90022208
	1991	0.46705	60.	5000.	91070216
HIGH 3-Hour					
	1987	0.79268	210.	18000.	87110706
	1988	0.81614	260.	20000.	88091703
	1989	0.69506	40.	1500.	89061115
	1990	0.88779	180.	2000.	90041815
	1991	0.84937	180.	2000.	91081615
HIGH 1-Hour					
	1987	2.10094	160.	1500.	87080314
	1988	2.08254	230.	1500.	88081714
	1989	2.08518	40.	1500.	89061114
	1990	1.91971	50.	1500.	90062013

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                 1991     2.06336          240.        1500.       91062513
 All receptor computations reported with respect to a user-specified origin
GRID          -242.89       -215.68
DISCRETE         0.00          0.00
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ISCBOB3 RELEASE 98056

ISCST3 OUTPUT FILE NUMBER 1 :GENNGC1.087
ISCST3 OUTPUT FILE NUMBER 2 :GENNGC1.088
ISCST3 OUTPUT FILE NUMBER 3 :GENNGC1.089
ISCST3 OUTPUT FILE NUMBER 4 :GENNGC1.090
ISCST3 OUTPUT FILE NUMBER 5 :GENNGC1.091
First title for last output file is: 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS 7/14/00
Second title for last output file is: SIGNIFICANT IMPACT ANALYSIS, EVERGLADES NP, GENERIC 10G/S, NAT. GAS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	BASE35				
Annual					
	1987	0.00213	454000.	2863200.	87123124
	1988	0.00174	550300.	2848600.	88123124
	1989	0.00192	459500.	2863200.	89123124
	1990	0.00161	459500.	2863200.	90123124
	1991	0.00156	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06082	464000.	2860000.	87021224
	1988	0.05267	454000.	2863200.	88012324
	1989	0.05547	514500.	2843000.	89012324
	1990	0.04129	488500.	2845500.	90032024
	1991	0.03828	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13320	459500.	2863200.	87091824
	1988	0.16251	495000.	2832500.	88121324
	1989	0.14842	514500.	2843000.	89012308
	1990	0.12030	459500.	2863200.	90051108
	1991	0.10672	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.23190	459500.	2863200.	87091824
	1988	0.29210	454000.	2863200.	88012303
	1989	0.30014	514500.	2848600.	89102903
	1990	0.24588	454000.	2863200.	90010824
	1991	0.22278	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.52653	469000.	2860000.	87080907
	1988	0.51596	473500.	2857000.	88110118
	1989	0.52035	473500.	2857000.	89120419
	1990	0.55031	464000.	2860000.	90081221
	1991	0.51920	459500.	2863200.	91053023
SOURCE GROUP ID:	BASE59				
Annual					
	1987	0.00217	454000.	2863200.	87123124
	1988	0.00175	550300.	2848600.	88123124
	1989	0.00195	459500.	2863200.	89123124
	1990	0.00163	459500.	2863200.	90123124
	1991	0.00159	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06172	464000.	2860000.	87021224
	1988	0.05317	454000.	2863200.	88012324
	1989	0.05603	514500.	2843000.	89012324
	1990	0.04165	488500.	2845500.	90032024
	1991	0.03863	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13552	459500.	2863200.	87091824
	1988	0.16440	495000.	2832500.	88121324
	1989	0.14995	514500.	2843000.	89012308
	1990	0.12209	459500.	2863200.	90051108
	1991	0.10909	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.23665	459500.	2863200.	87091824
	1988	0.29495	454000.	2863200.	88012303
	1989	0.30569	514500.	2848600.	89102903
	1990	0.24870	454000.	2863200.	90010824
	1991	0.22488	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.53312	469000.	2860000.	87080907
	1988	0.52232	473500.	2857000.	88110118
	1989	0.52680	473500.	2857000.	89120419
	1990	0.55821	464000.	2860000.	90081221
	1991	0.52591	459500.	2863200.	91053023
SOURCE GROUP ID:	BASE95				

Annual					
	1987	0.00225	454000.	2863200.	87123124
	1988	0.00179	550300.	2848600.	88123124
	1989	0.00201	459500.	2863200.	89123124
	1990	0.00169	459500.	2863200.	90123124
	1991	0.00165	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06391	464000.	2860000.	87021224
	1988	0.05433	454000.	2863200.	88012324
	1989	0.05737	514500.	2843000.	89012324
	1990	0.04250	488500.	2845500.	90032024
	1991	0.03946	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.14118	459500.	2863200.	87091824
	1988	0.16892	495000.	2832500.	88121324
	1989	0.15358	514500.	2843000.	89012308
	1990	0.12643	459500.	2863200.	90051108
	1991	0.11486	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.24832	459500.	2863200.	87091824
	1988	0.30166	454000.	2863200.	88012303
	1989	0.31916	514500.	2848600.	89102903
	1990	0.25544	454000.	2863200.	90010824
	1991	0.22990	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.54898	469000.	2860000.	87080907
	1988	0.53757	473500.	2857000.	88110118
	1989	0.54218	473500.	2857000.	89120419
	1990	0.57730	464000.	2860000.	90081221
	1991	0.54203	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7535				
Annual					
	1987	0.00248	454000.	2863200.	87123124
	1988	0.00194	550300.	2848600.	88123124
	1989	0.00221	459500.	2863200.	89123124
	1990	0.00188	459500.	2863200.	90123124
	1991	0.00176	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06907	464000.	2860000.	87021224
	1988	0.05692	454000.	2863200.	88012324
	1989	0.06039	514500.	2843000.	89012324
	1990	0.04442	488500.	2845500.	90032024
	1991	0.04133	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.15473	459500.	2863200.	87091824
	1988	0.17923	495000.	2832500.	88121324
	1989	0.16178	514500.	2843000.	89012308
	1990	0.13667	459500.	2863200.	90051108
	1991	0.12864	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.27651	459500.	2863200.	87091824
	1988	0.31662	454000.	2863200.	88012303
	1989	0.35089	514500.	2848600.	89102903
	1990	0.27074	454000.	2863200.	90010824
	1991	0.24123	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.58560	469000.	2860000.	87080907
	1988	0.57253	473500.	2857000.	88110118
	1989	0.57709	473500.	2857000.	89120419
	1990	0.62168	464000.	2860000.	90081221
	1991	0.57914	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7559				
Annual					
	1987	0.00249	454000.	2863200.	87123124
	1988	0.00195	550300.	2848600.	88123124
	1989	0.00223	459500.	2863200.	89123124
	1990	0.00192	459500.	2863200.	90123124
	1991	0.00180	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06959	464000.	2860000.	87021224
	1988	0.05718	454000.	2863200.	88012324
	1989	0.06069	514500.	2843000.	89012324
	1990	0.04460	488500.	2845500.	90032024
	1991	0.04151	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.15607	459500.	2863200.	87091824
	1988	0.18028	495000.	2832500.	88121324

	1989	0.16260	514500.	2843000.	89012308
	1990	0.13770	459500.	2863200.	90051108
	1991	0.13008	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.27933	459500.	2863200.	87091824
	1988	0.31812	454000.	2863200.	88012303
	1989	0.35411	514500.	2848600.	89102903
	1990	0.27224	454000.	2863200.	90010824
	1991	0.24233	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.58913	469000.	2860000.	87080907
	1988	0.57594	473500.	2857000.	88110118
	1989	0.58057	473500.	2857000.	89120419
	1990	0.62602	464000.	2860000.	90081221
	1991	0.58277	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7595				
Annual					
	1987	0.00254	454000.	2863200.	87123124
	1988	0.00199	550300.	2848600.	88123124
	1989	0.00228	459500.	2863200.	89123124
	1990	0.00196	459500.	2863200.	90123124
	1991	0.00189	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07129	459500.	2863200.	87091824
	1988	0.05794	454000.	2863200.	88012324
	1989	0.06159	514500.	2843000.	89012324
	1990	0.04516	488500.	2845500.	90032024
	1991	0.04205	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.16015	459500.	2863200.	87091824
	1988	0.18338	495000.	2832500.	88121324
	1989	0.16504	514500.	2843000.	89012308
	1990	0.14080	459500.	2863200.	90051108
	1991	0.13443	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.28792	459500.	2863200.	87091824
	1988	0.32253	454000.	2863200.	88012303
	1989	0.36381	514500.	2848600.	89102903
	1990	0.27674	454000.	2863200.	90010824
	1991	0.24560	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.59979	469000.	2860000.	87080907
	1988	0.58618	473500.	2857000.	88110118
	1989	0.59094	473500.	2857000.	89120419
	1990	0.63911	464000.	2860000.	90081221
	1991	0.59366	459500.	2863200.	91053023
SOURCE GROUP ID:	LD5035				
Annual					
	1987	0.00269	454000.	2863200.	87123124
	1988	0.00209	550300.	2848600.	88123124
	1989	0.00253	459500.	2863200.	89123124
	1990	0.00215	459500.	2863200.	90123124
	1991	0.00201	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07704	459500.	2863200.	87091824
	1988	0.06020	454000.	2863200.	88012324
	1989	0.06427	514500.	2843000.	89012324
	1990	0.04753	459500.	2863200.	90051124
	1991	0.04443	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17309	459500.	2863200.	87091824
	1988	0.19280	495000.	2832500.	88121324
	1989	0.17234	514500.	2843000.	89012308
	1990	0.15051	459500.	2863200.	90051108
	1991	0.14809	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.31538	459500.	2863200.	87091824
	1988	0.33565	454000.	2863200.	88012303
	1989	0.39403	514500.	2848600.	89102903
	1990	0.30071	459500.	2863200.	90061203
	1991	0.25694	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.63263	469000.	2860000.	87080907
	1988	0.61748	473500.	2857000.	88110118
	1989	0.62224	473500.	2857000.	89120419
	1990	0.67961	464000.	2860000.	90081221
	1991	0.62708	459500.	2863200.	91053023

SOURCE GROUP ID: LD5059

Annual					
	1987	0.00270	454000.	2863200.	87123124
	1988	0.00210	550300.	2848600.	88123124
	1989	0.00254	459500.	2863200.	89123124
	1990	0.00216	459500.	2863200.	90123124
	1991	0.00202	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07741	459500.	2863200.	87091824
	1988	0.06035	454000.	2863200.	88012324
	1989	0.06445	514500.	2843000.	89012324
	1990	0.04773	459500.	2863200.	90051124
	1991	0.04471	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17392	459500.	2863200.	87091824
	1988	0.19344	495000.	2832500.	88121324
	1989	0.17283	514500.	2843000.	89012308
	1990	0.15121	459500.	2863200.	90061208
	1991	0.14904	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.31717	459500.	2863200.	87091824
	1988	0.33652	454000.	2863200.	88012303
	1989	0.39605	514500.	2848600.	89102903
	1990	0.30242	459500.	2863200.	90061203
	1991	0.25785	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.63471	469000.	2860000.	87080907
	1988	0.61949	473500.	2857000.	88110118
	1989	0.62431	473500.	2857000.	89120419
	1990	0.68220	464000.	2860000.	90081221
	1991	0.62922	459500.	2863200.	91053023

SOURCE GROUP ID: LD5095

Annual					
	1987	0.00280	454000.	2863200.	87123124
	1988	0.00214	550300.	2848600.	88123124
	1989	0.00266	459500.	2863200.	89123124
	1990	0.00220	459500.	2863200.	90123124
	1991	0.00206	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07938	459500.	2863200.	87091824
	1988	0.06110	454000.	2863200.	88012324
	1989	0.06535	514500.	2843000.	89012324
	1990	0.04878	459500.	2863200.	90051124
	1991	0.04616	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17836	459500.	2863200.	87091824
	1988	0.19663	495000.	2832500.	88121324
	1989	0.17528	514500.	2843000.	89012308
	1990	0.15575	459500.	2863200.	90061208
	1991	0.15385	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.32667	459500.	2863200.	87091824
	1988	0.34088	454000.	2863200.	88012303
	1989	0.40645	514500.	2848600.	89102903
	1990	0.31150	459500.	2863200.	90061203
	1991	0.26250	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.64563	469000.	2860000.	87080907
	1988	0.62993	473500.	2857000.	88110118
	1989	0.63480	473500.	2857000.	89120419
	1990	0.69580	464000.	2860000.	90081221
	1991	0.64039	459500.	2863200.	91053023

SOURCE GROUP ID: HPM35

Annual					
	1987	0.00212	454000.	2863200.	87123124
	1988	0.00172	550300.	2848600.	88123124
	1989	0.00190	459500.	2863200.	89123124
	1990	0.00159	459500.	2863200.	90123124
	1991	0.00152	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06015	464000.	2860000.	87021224
	1988	0.05231	454000.	2863200.	88012324
	1989	0.05506	514500.	2843000.	89012324
	1990	0.04102	488500.	2845500.	90032024
	1991	0.03802	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13143	459500.	2863200.	87091824

	1988	0.16113	495000.	2832500.	88121324
	1989	0.14729	514500.	2843000.	89012308
	1990	0.11896	459500.	2863200.	90051108
	1991	0.10552	514500.	2843000.	91030508
HIGH 3-Hour					
	1987	0.22829	459500.	2863200.	87091824
	1988	0.29003	454000.	2863200.	88012303
	1989	0.29603	514500.	2848600.	89102903
	1990	0.24377	454000.	2863200.	90010824
	1991	0.22118	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.52148	469000.	2860000.	87080907
	1988	0.51116	473500.	2857000.	88110118
	1989	0.51559	473500.	2857000.	89120419
	1990	0.54429	464000.	2860000.	90081221
	1991	0.51412	459500.	2863200.	91053023
SOURCE GROUP ID:	HPM59				
Annual					
	1987	0.00214	454000.	2863200.	87123124
	1988	0.00174	550300.	2848600.	88123124
	1989	0.00192	459500.	2863200.	89123124
	1990	0.00161	459500.	2863200.	90123124
	1991	0.00156	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06093	464000.	2860000.	87021224
	1988	0.05274	454000.	2863200.	88012324
	1989	0.05555	514500.	2843000.	89012324
	1990	0.04133	488500.	2845500.	90032024
	1991	0.03832	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13342	459500.	2863200.	87091824
	1988	0.16277	495000.	2832500.	88121324
	1989	0.14862	514500.	2843000.	89012308
	1990	0.12050	459500.	2863200.	90051108
	1991	0.10705	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.23236	459500.	2863200.	87091824
	1988	0.29251	454000.	2863200.	88012303
	1989	0.30082	514500.	2848600.	89102903
	1990	0.24622	454000.	2863200.	90010824
	1991	0.22301	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.52717	469000.	2860000.	87080907
	1988	0.51666	473500.	2857000.	88110118
	1989	0.52120	473500.	2857000.	89120419
	1990	0.55112	464000.	2860000.	90081221
	1991	0.51993	459500.	2863200.	91053023
SOURCE GROUP ID:	HPM95				
Annual					
	1987	0.00218	454000.	2863200.	87123124
	1988	0.00176	550300.	2848600.	88123124
	1989	0.00196	459500.	2863200.	89123124
	1990	0.00164	459500.	2863200.	90123124
	1991	0.00160	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06196	464000.	2860000.	87021224
	1988	0.05330	454000.	2863200.	88012324
	1989	0.05618	514500.	2843000.	89012324
	1990	0.04174	488500.	2845500.	90032024
	1991	0.03872	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13605	459500.	2863200.	87091824
	1988	0.16492	495000.	2832500.	88121324
	1989	0.15036	514500.	2843000.	89012308
	1990	0.12253	459500.	2863200.	90051108
	1991	0.10974	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.23774	459500.	2863200.	87091824
	1988	0.29574	454000.	2863200.	88012303
	1989	0.30712	514500.	2848600.	89102903
	1990	0.24942	454000.	2863200.	90010824
	1991	0.22539	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.53461	469000.	2860000.	87080907
	1988	0.52385	473500.	2857000.	88110118
	1989	0.52851	473500.	2857000.	89120419
	1990	0.56006	464000.	2860000.	90081221

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                    1991      0.52752         459500.      2863200.       91053023
  All receptor computations reported with respect to a user-specified origin
 GRID               0.00            0.00
 DISCRETE           0.00            0.00
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ISCBOB3 RELEASE 98056

ISCST3 OUTPUT FILE NUMBER 1 :GENFOC2.087
ISCST3 OUTPUT FILE NUMBER 2 :GENFOC2.088
ISCST3 OUTPUT FILE NUMBER 3 :GENFOC2.089
ISCST3 OUTPUT FILE NUMBER 4 :GENFOC2.090
ISCST3 OUTPUT FILE NUMBER 5 :GENFOC2.091
First title for last output file is: 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS 7/14/00
Second title for last output file is: SIGNIFICANT IMPACT ANALYSIS, SITE VICINITY, GENERIC 10G/S, FUEL OIL

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	BASE35				
Annual					
	1987	0.01115	200.	16000.	87123124
	1988	0.01266	240.	16000.	88123124
	1989	0.00994	230.	16000.	89123124
	1990	0.01871	240.	16000.	90123124
	1991	0.01336	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.24625	250.	8000.	87081824
	1988	0.20204	180.	20000.	88121824
	1989	0.13560	190.	12000.	89012424
	1990	0.18226	230.	6000.	90051124
	1991	0.15799	250.	18000.	91111424
HIGH 8-Hour					
	1987	0.40575	250.	20000.	87081808
	1988	0.40468	180.	20000.	88121808
	1989	0.35787	140.	20000.	89012308
	1990	0.43962	300.	20000.	90022208
	1991	0.39834	250.	20000.	91113008
HIGH 3-Hour					
	1987	0.75807	210.	18000.	87110706
	1988	0.77966	260.	20000.	88091703
	1989	0.63523	260.	1500.	89073115
	1990	0.88144	180.	2000.	90041815
	1991	0.84550	180.	2000.	91081615
HIGH 1-Hour					
	1987	1.95860	10.	1500.	87070612
	1988	1.90205	40.	1500.	88060513
	1989	1.90510	260.	1500.	89073114
	1990	1.90514	50.	1500.	90062013
	1991	1.96384	250.	1500.	91062813
SOURCE GROUP ID:	BASE59				
Annual					
	1987	0.01138	200.	16000.	87123124
	1988	0.01299	240.	16000.	88123124
	1989	0.01026	300.	14000.	89123124
	1990	0.01912	240.	16000.	90123124
	1991	0.01363	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.24922	250.	8000.	87081824
	1988	0.20604	180.	20000.	88121824
	1989	0.13767	190.	12000.	89012424
	1990	0.18409	230.	6000.	90051124
	1991	0.16077	250.	18000.	91111424
HIGH 8-Hour					
	1987	0.41481	250.	20000.	87081808
	1988	0.41263	180.	18000.	88121808
	1989	0.36567	140.	20000.	89012308
	1990	0.44829	300.	20000.	90022208
	1991	0.40684	250.	20000.	91113008
HIGH 3-Hour					
	1987	0.77264	210.	18000.	87110706
	1988	0.79509	260.	20000.	88091703
	1989	0.63724	260.	1500.	89073115
	1990	0.88417	180.	2000.	90041815
	1991	0.84717	180.	2000.	91081615
HIGH 1-Hour					
	1987	1.96464	10.	1500.	87070612
	1988	1.90918	40.	1500.	88060513
	1989	1.91105	260.	1500.	89073114
	1990	1.91111	50.	1500.	90062013
	1991	2.02965	300.	1500.	91042613
SOURCE GROUP ID:	BASE95				

Annual					
	1987	0.01230	200.	16000.	87123124
	1988	0.01395	240.	16000.	88123124
	1989	0.01112	300.	12000.	89123124
	1990	0.02058	240.	14000.	90123124
	1991	0.01465	250.	14000.	91123124
HIGH 24-Hour					
	1987	0.30222	250.	8000.	87081824
	1988	0.21761	180.	20000.	88121824
	1989	0.16616	310.	14000.	89091224
	1990	0.18999	230.	6000.	90051124
	1991	0.22256	60.	6000.	91070224
HIGH 8-Hour					
	1987	0.52466	250.	6000.	87081816
	1988	0.43564	180.	18000.	88121808
	1989	0.38846	140.	20000.	89012308
	1990	0.47370	300.	20000.	90022208
	1991	0.46822	60.	5000.	91070216
HIGH 3-Hour					
	1987	0.81514	210.	18000.	87110706
	1988	0.84054	260.	20000.	88091703
	1989	0.73438	270.	1500.	89060212
	1990	0.89202	180.	2000.	90041815
	1991	0.85196	180.	2000.	91081615
HIGH 1-Hour					
	1987	2.19210	270.	1500.	87052012
	1988	2.09357	230.	1500.	88081714
	1989	2.20315	270.	1500.	89060211
	1990	1.93087	50.	1500.	90062013
	1991	2.15868	210.	1500.	91072614
SOURCE GROUP ID:	LD7535				
Annual					
	1987	0.01406	200.	14000.	87123124
	1988	0.01607	240.	14000.	88123124
	1989	0.01337	300.	10000.	89123124
	1990	0.02371	240.	14000.	90123124
	1991	0.01712	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.32084	250.	8000.	87081824
	1988	0.24049	180.	18000.	88121824
	1989	0.18975	320.	8000.	89091424
	1990	0.20306	230.	6000.	90051124
	1991	0.24960	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.54880	250.	6000.	87081816
	1988	0.47932	180.	16000.	88121808
	1989	0.43931	320.	8000.	89091416
	1990	0.52251	300.	20000.	90022208
	1991	0.64182	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.89781	210.	16000.	87110706
	1988	0.92835	260.	20000.	88091703
	1989	0.81566	50.	1500.	89072812
	1990	0.90634	180.	2000.	90041815
	1991	0.87865	180.	1500.	91081615
HIGH 1-Hour					
	1987	2.48573	20.	1500.	87092013
	1988	2.46564	230.	1500.	88080912
	1989	2.44697	50.	1500.	89072812
	1990	2.42579	50.	1500.	90090811
	1991	2.35630	330.	1500.	91072212
SOURCE GROUP ID:	LD7559				
Annual					
	1987	0.01423	200.	14000.	87123124
	1988	0.01626	240.	14000.	88123124
	1989	0.01351	300.	10000.	89123124
	1990	0.02399	240.	14000.	90123124
	1991	0.01732	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.32298	250.	8000.	87081824
	1988	0.24472	180.	18000.	88121824
	1989	0.19098	320.	8000.	89091424
	1990	0.20461	230.	6000.	90051124
	1991	0.25055	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.55165	250.	6000.	87081816
	1988	0.48470	180.	16000.	88121808

	1989	0.44145	320.	8000.	89091416
	1990	0.52804	300.	20000.	90022208
	1991	0.64427	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.86587	210.	20000.	87110706
	1988	0.93821	260.	20000.	88091703
	1989	0.81712	50.	1500.	89072812
	1990	0.91001	180.	1500.	90041815
	1991	0.88320	180.	1500.	91081615
HIGH 1-Hour					
	1987	2.49006	20.	1500.	87092013
	1988	2.46996	230.	1500.	88080912
	1989	2.45136	50.	1500.	89072812
	1990	2.43017	50.	1500.	90090811
	1991	2.36086	330.	1500.	91072212
SOURCE GROUP ID:	LD7595				
Annual					
	1987	0.01473	200.	14000.	87123124
	1988	0.01700	240.	14000.	88123124
	1989	0.01399	300.	10000.	89123124
	1990	0.02492	240.	14000.	90123124
	1991	0.01786	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.32862	250.	8000.	87081824
	1988	0.25167	180.	18000.	88121824
	1989	0.19421	320.	8000.	89091424
	1990	0.20873	230.	6000.	90051124
	1991	0.25307	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.55926	250.	6000.	87081816
	1988	0.49852	180.	16000.	88121808
	1989	0.45078	140.	20000.	89012308
	1990	0.54310	300.	18000.	90022208
	1991	0.65074	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.88966	210.	20000.	87110706
	1988	0.96381	260.	20000.	88091703
	1989	0.85547	90.	1500.	89051212
	1990	1.37334	50.	1500.	90090812
	1991	0.89519	180.	1500.	91081615
HIGH 1-Hour					
	1987	2.58467	20.	1500.	87092113
	1988	2.59219	20.	1500.	88082612
	1989	2.56642	90.	1500.	89051212
	1990	2.57776	80.	1500.	90082212
	1991	2.56650	270.	1500.	91062812
SOURCE GROUP ID:	LD5035				
Annual					
	1987	0.01668	200.	12000.	87123124
	1988	0.01903	240.	12000.	88123124
	1989	0.01558	240.	12000.	89123124
	1990	0.02824	240.	14000.	90123124
	1991	0.02006	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.34936	250.	8000.	87081824
	1988	0.27999	180.	16000.	88121824
	1989	0.24932	230.	1500.	89073024
	1990	0.22575	240.	16000.	90121424
	1991	0.26236	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.58782	250.	6000.	87081816
	1988	0.54632	180.	16000.	88121808
	1989	0.74790	230.	1500.	89073016
	1990	0.59636	300.	18000.	90022208
	1991	0.67464	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.97688	190.	18000.	87100506
	1988	1.05849	260.	18000.	88091703
	1989	1.49579	230.	1500.	89073015
	1990	1.39832	50.	1500.	90090812
	1991	0.99244	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.69617	50.	1500.	87080313
	1988	2.72814	310.	1500.	88071812
	1989	2.87644	50.	1500.	89051611
	1990	2.78467	10.	1500.	90040513
	1991	2.84203	240.	1500.	91091913

SOURCE GROUP ID: LD5059

Annual					
	1987	0.01687	200.	12000.	87123124
	1988	0.01915	240.	12000.	88123124
	1989	0.01567	240.	12000.	89123124
	1990	0.02841	240.	14000.	90123124
	1991	0.02023	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.35063	250.	8000.	87081824
	1988	0.28155	180.	16000.	88121824
	1989	0.24959	230.	1500.	89073024
	1990	0.22719	240.	16000.	90121424
	1991	0.26291	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.58953	250.	6000.	87081816
	1988	0.54936	180.	16000.	88121808
	1989	0.74872	230.	1500.	89073016
	1990	0.59962	300.	18000.	90022208
	1991	0.67606	170.	1500.	91081616
HIGH 3-Hour					
	1987	0.98229	190.	18000.	87100506
	1988	1.06426	260.	18000.	88091703
	1989	1.49744	230.	1500.	89073015
	1990	1.39997	50.	1500.	90090812
	1991	0.99857	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.90978	200.	1500.	87091412
	1988	2.73033	310.	1500.	88071812
	1989	2.87886	50.	1500.	89051611
	1990	2.78701	10.	1500.	90040513
	1991	2.84430	240.	1500.	91091913

SOURCE GROUP ID: LD5095

Annual					
	1987	0.01749	200.	12000.	87123124
	1988	0.01989	240.	12000.	88123124
	1989	0.01606	240.	12000.	89123124
	1990	0.02930	240.	12000.	90123124
	1991	0.02094	250.	12000.	91123124
HIGH 24-Hour					
	1987	0.35594	250.	8000.	87081824
	1988	0.28783	180.	16000.	88121824
	1989	0.25078	230.	1500.	89073024
	1990	0.26493	230.	6000.	90051124
	1991	0.26524	170.	1500.	91081624
HIGH 8-Hour					
	1987	0.59678	250.	6000.	87081816
	1988	0.56147	180.	16000.	88121808
	1989	0.75228	230.	1500.	89073016
	1990	0.62433	230.	6000.	90051116
	1991	0.68204	170.	1500.	91081616
HIGH 3-Hour					
	1987	1.00431	190.	18000.	87100506
	1988	1.04356	260.	20000.	88091703
	1989	1.50457	230.	1500.	89073015
	1990	1.40706	50.	1500.	90090812
	1991	1.02375	250.	20000.	91111424
HIGH 1-Hour					
	1987	2.92005	200.	1500.	87091412
	1988	2.95098	280.	1500.	88072612
	1989	2.88904	50.	1500.	89051611
	1990	2.90720	80.	1500.	90070412
	1991	2.85392	240.	1500.	91091913

All receptor computations reported with respect to a user-specified origin

GRID	-242.89	-215.68
DISCRETE	0.00	0.00

ISCBOB3 RELEASE 98056

ISCST3 OUTPUT FILE NUMBER 1 :GENFOC1.087
ISCST3 OUTPUT FILE NUMBER 2 :GENFOC1.088
ISCST3 OUTPUT FILE NUMBER 3 :GENFOC1.089
ISCST3 OUTPUT FILE NUMBER 4 :GENFOC1.090
ISCST3 OUTPUT FILE NUMBER 5 :GENFOC1.091
First title for last output file is: 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS 7/14/00
Second title for last output file is: SIGNIFICANT IMPACT ANALYSIS, EVERGLADES NP, GENERIC 10G/S, FUEL OIL

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	BASE35				
Annual					
	1987	0.00211	454000.	2863200.	87123124
	1988	0.00171	550300.	2848600.	88123124
	1989	0.00189	459500.	2863200.	89123124
	1990	0.00159	459500.	2863200.	90123124
	1991	0.00151	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.05980	464000.	2860000.	87021224
	1988	0.05211	454000.	2863200.	88012324
	1989	0.05483	514500.	2843000.	89012324
	1990	0.04088	488500.	2845500.	90032024
	1991	0.03789	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13061	459500.	2863200.	87091824
	1988	0.16039	495000.	2832500.	88121324
	1989	0.14669	514500.	2843000.	89012308
	1990	0.11830	459500.	2863200.	90051108
	1991	0.10500	514500.	2843000.	91030508
HIGH 3-Hour					
	1987	0.22687	459500.	2863200.	87013124
	1988	0.28889	454000.	2863200.	88012303
	1989	0.29394	514500.	2848600.	89102903
	1990	0.24270	454000.	2863200.	90010824
	1991	0.22040	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.51912	469000.	2860000.	87080907
	1988	0.50880	473500.	2857000.	88110118
	1989	0.51308	473500.	2857000.	89120419
	1990	0.54143	464000.	2860000.	90081221
	1991	0.51165	459500.	2863200.	91053023
SOURCE GROUP ID:	BASE59				
Annual					
	1987	0.00213	454000.	2863200.	87123124
	1988	0.00173	550300.	2848600.	88123124
	1989	0.00192	459500.	2863200.	89123124
	1990	0.00161	459500.	2863200.	90123124
	1991	0.00156	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06071	464000.	2860000.	87021224
	1988	0.05262	454000.	2863200.	88012324
	1989	0.05540	514500.	2843000.	89012324
	1990	0.04124	488500.	2845500.	90032024
	1991	0.03824	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13292	459500.	2863200.	87091824
	1988	0.16229	495000.	2832500.	88121324
	1989	0.14824	514500.	2843000.	89012308
	1990	0.12009	459500.	2863200.	90051108
	1991	0.10645	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.23132	459500.	2863200.	87091824
	1988	0.29178	454000.	2863200.	88012303
	1989	0.29949	514500.	2848600.	89102903
	1990	0.24555	454000.	2863200.	90010824
	1991	0.22253	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.52573	469000.	2860000.	87080907
	1988	0.51520	473500.	2857000.	88110118
	1989	0.51960	473500.	2857000.	89120419
	1990	0.54935	464000.	2860000.	90081221
	1991	0.51840	459500.	2863200.	91053023
SOURCE GROUP ID:	BASE95				

Annual					
	1987	0.00224	454000.	2863200.	87123124
	1988	0.00178	550300.	2848600.	88123124
	1989	0.00200	459500.	2863200.	89123124
	1990	0.00168	459500.	2863200.	90123124
	1991	0.00163	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06334	464000.	2860000.	87021224
	1988	0.05403	454000.	2863200.	88012324
	1989	0.05703	514500.	2843000.	89012324
	1990	0.04228	488500.	2845500.	90032024
	1991	0.03925	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.13971	459500.	2863200.	87091824
	1988	0.16774	495000.	2832500.	88121324
	1989	0.15264	514500.	2843000.	89012308
	1990	0.12530	459500.	2863200.	90051108
	1991	0.11334	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.24528	459500.	2863200.	87091824
	1988	0.29992	454000.	2863200.	88012303
	1989	0.31564	514500.	2848600.	89102903
	1990	0.25370	454000.	2863200.	90010824
	1991	0.22861	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.54489	469000.	2860000.	87080907
	1988	0.53363	473500.	2857000.	88110118
	1989	0.53819	473500.	2857000.	89120419
	1990	0.57236	464000.	2860000.	90081221
	1991	0.53787	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7535				
Annual					
	1987	0.00246	454000.	2863200.	87123124
	1988	0.00191	550300.	2848600.	88123124
	1989	0.00219	459500.	2863200.	89123124
	1990	0.00187	459500.	2863200.	90123124
	1991	0.00175	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06833	464000.	2860000.	87021224
	1988	0.05656	454000.	2863200.	88012324
	1989	0.05997	514500.	2843000.	89012324
	1990	0.04415	488500.	2845500.	90032024
	1991	0.04107	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.15281	459500.	2863200.	87091824
	1988	0.17779	495000.	2832500.	88121324
	1989	0.16064	514500.	2843000.	89012308
	1990	0.13523	459500.	2863200.	90051108
	1991	0.12665	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.27250	459500.	2863200.	87091824
	1988	0.31455	454000.	2863200.	88012303
	1989	0.34639	514500.	2848600.	89102903
	1990	0.26862	454000.	2863200.	90010824
	1991	0.23967	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.58053	469000.	2860000.	87080907
	1988	0.56768	473500.	2857000.	88110118
	1989	0.57223	473500.	2857000.	89120419
	1990	0.61550	464000.	2860000.	90081221
	1991	0.57399	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7559				
Annual					
	1987	0.00247	454000.	2863200.	87123124
	1988	0.00193	550300.	2848600.	88123124
	1989	0.00221	459500.	2863200.	89123124
	1990	0.00188	459500.	2863200.	90123124
	1991	0.00176	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.06891	464000.	2860000.	87021224
	1988	0.05684	454000.	2863200.	88012324
	1989	0.06030	514500.	2843000.	89012324
	1990	0.04436	488500.	2845500.	90032024
	1991	0.04127	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.15427	459500.	2863200.	87091824
	1988	0.17892	495000.	2832500.	88121324

	1989	0.16154	514500.	2843000.	89012308
	1990	0.13634	459500.	2863200.	90051108
	1991	0.12821	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.27556	459500.	2863200.	87091824
	1988	0.31618	454000.	2863200.	88012303
	1989	0.34989	514500.	2848600.	89102903
	1990	0.27026	454000.	2863200.	90010824
	1991	0.24087	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.58440	469000.	2860000.	87080907
	1988	0.57141	473500.	2857000.	88110118
	1989	0.57603	473500.	2857000.	89120419
	1990	0.62023	464000.	2860000.	90081221
	1991	0.57795	459500.	2863200.	91053023
SOURCE GROUP ID:	LD7595				
Annual					
	1987	0.00252	454000.	2863200.	87123124
	1988	0.00196	550300.	2848600.	88123124
	1989	0.00226	459500.	2863200.	89123124
	1990	0.00194	459500.	2863200.	90123124
	1991	0.00181	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07038	464000.	2860000.	87021224
	1988	0.05756	454000.	2863200.	88012324
	1989	0.06114	514500.	2843000.	89012324
	1990	0.04488	488500.	2845500.	90032024
	1991	0.04178	500000.	2832500.	91022524
HIGH 8-Hour					
	1987	0.15806	459500.	2863200.	87091824
	1988	0.18182	495000.	2832500.	88121324
	1989	0.16381	514500.	2843000.	89012308
	1990	0.13922	459500.	2863200.	90051108
	1991	0.13224	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.28352	459500.	2863200.	87091824
	1988	0.32033	454000.	2863200.	88012303
	1989	0.35890	514500.	2848600.	89102903
	1990	0.27447	454000.	2863200.	90010824
	1991	0.24394	488500.	2845500.	91022521
HIGH 1-Hour					
	1987	0.59435	469000.	2860000.	87080907
	1988	0.58098	473500.	2857000.	88110118
	1989	0.58573	473500.	2857000.	89120419
	1990	0.63244	464000.	2860000.	90081221
	1991	0.58813	459500.	2863200.	91053023
SOURCE GROUP ID:	LD5035				
Annual					
	1987	0.00268	454000.	2863200.	87123124
	1988	0.00208	550300.	2848600.	88123124
	1989	0.00248	459500.	2863200.	89123124
	1990	0.00212	459500.	2863200.	90123124
	1991	0.00200	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07632	459500.	2863200.	87091824
	1988	0.05993	454000.	2863200.	88012324
	1989	0.06394	514500.	2843000.	89012324
	1990	0.04715	459500.	2863200.	90051124
	1991	0.04391	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17148	459500.	2863200.	87091824
	1988	0.19165	495000.	2832500.	88121324
	1989	0.17145	514500.	2843000.	89012308
	1990	0.14930	459500.	2863200.	90051108
	1991	0.14638	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.31194	459500.	2863200.	87091824
	1988	0.33406	454000.	2863200.	88012303
	1989	0.39027	514500.	2848600.	89102903
	1990	0.29743	459500.	2863200.	90061203
	1991	0.25526	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.62862	469000.	2860000.	87080907
	1988	0.61366	473500.	2857000.	88110118
	1989	0.61842	473500.	2857000.	89120419
	1990	0.67463	464000.	2860000.	90081221
	1991	0.62299	459500.	2863200.	91053023

SOURCE GROUP ID: LD5059

Annual					
	1987	0.00268	454000.	2863200.	87123124
	1988	0.00209	550300.	2848600.	88123124
	1989	0.00249	459500.	2863200.	89123124
	1990	0.00214	459500.	2863200.	90123124
	1991	0.00200	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07668	459500.	2863200.	87091824
	1988	0.06007	454000.	2863200.	88012324
	1989	0.06411	514500.	2843000.	89012324
	1990	0.04734	459500.	2863200.	90051124
	1991	0.04418	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17227	459500.	2863200.	87091824
	1988	0.19225	495000.	2832500.	88121324
	1989	0.17192	514500.	2843000.	89012308
	1990	0.14991	459500.	2863200.	90051108
	1991	0.14727	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.31365	459500.	2863200.	87091824
	1988	0.33489	454000.	2863200.	88012303
	1989	0.39220	514500.	2848600.	89102903
	1990	0.29906	459500.	2863200.	90061203
	1991	0.25613	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.63061	469000.	2860000.	87080907
	1988	0.61559	473500.	2857000.	88110118
	1989	0.62040	473500.	2857000.	89120419
	1990	0.67712	464000.	2860000.	90081221
	1991	0.62505	459500.	2863200.	91053023

SOURCE GROUP ID: LD5095

Annual					
	1987	0.00273	454000.	2863200.	87123124
	1988	0.00212	550300.	2848600.	88123124
	1989	0.00262	459500.	2863200.	89123124
	1990	0.00217	459500.	2863200.	90123124
	1991	0.00204	459500.	2863200.	91123124
HIGH 24-Hour					
	1987	0.07815	459500.	2863200.	87091824
	1988	0.06064	454000.	2863200.	88012324
	1989	0.06479	514500.	2843000.	89012324
	1990	0.04813	459500.	2863200.	90051124
	1991	0.04526	473500.	2860000.	91021024
HIGH 8-Hour					
	1987	0.17559	459500.	2863200.	87091824
	1988	0.19466	495000.	2832500.	88121324
	1989	0.17377	514500.	2843000.	89012308
	1990	0.15291	459500.	2863200.	90061208
	1991	0.15088	473500.	2860000.	91021008
HIGH 3-Hour					
	1987	0.32073	459500.	2863200.	87091824
	1988	0.33820	454000.	2863200.	88012303
	1989	0.40000	514500.	2848600.	89102903
	1990	0.30583	459500.	2863200.	90061203
	1991	0.25963	514500.	2843000.	91030503
HIGH 1-Hour					
	1987	0.63882	469000.	2860000.	87080907
	1988	0.62345	473500.	2857000.	88110118
	1989	0.62833	473500.	2857000.	89120419
	1990	0.68734	464000.	2860000.	90081221
	1991	0.63345	459500.	2863200.	91053023

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

```
CO STARTING
CO TITLEONE 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS          7/14/00
CO TITLETWO SIGNIFICANT IMPACT ANALYSIS, SITE VICINITY, GENERIC 10G/S, NAT. GAS
CO MODELOPT DFAULT CONC   RURAL NOCMPL
CO AVERTIME PERIOD 24 8 3 1
CO POLLUTID GEN
CO DCAYCOEF    .000000
CO RUNORNOT RUN
CO FINISHED

SO STARTING

** Source Location Cards:
** MODELING ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS, NOT A STACK
** LOCATION IS USED FOR POLAR DISCRETE RECEPTORS.
SO LOCATION  ORIGIN   POINT   0.00      0.00    0.00
SO SRCPARAM  ORIGIN    0.0    10.0      500.0     30.00    10.00

**  CT STACK LETTER CODE
** ------------------------
**  A -  CT7 (NORTH) STACK
**  B -  CT8 (SOUTH) STACK
**          SRCID SRCTYP          XS          YS       ZS
**   UTM                          (m)         (m)      (m)
SO LOCATION  BASE35A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE35B  POINT    -233.95     -236.72   0.0

SO LOCATION  BASE59A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE59B  POINT    -233.95     -236.72   0.0

SO LOCATION  BASE95A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE95B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7535A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7535B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7559A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7559B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7595A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7595B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5035A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5035B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5059A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5059B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5095A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5095B  POINT    -233.95     -236.72   0.0


SO LOCATION  HPM35A   POINT    -251.82     -194.64   0.0
SO LOCATION  HPM35B   POINT    -233.95     -236.72   0.0

SO LOCATION  HPM59A   POINT    -251.82     -194.64   0.0
SO LOCATION  HPM59B   POINT    -233.95     -236.72   0.0

SO LOCATION  HPM95A   POINT    -251.82     -194.64   0.0
SO LOCATION  HPM95B   POINT    -233.95     -236.72   0.0
** Source Parameter Cards:
** POINT:   SRCID           QS      HS        TS        VS        DS
**                         (g/s)    (m)       (K)       (m/s)     (m)
SO SRCPARAM   BASE35A      5.0     24.4      863.7     37.86     6.25
SO SRCPARAM   BASE35B      5.0     24.4      863.7     37.86     6.25

SO SRCPARAM   BASE59A      5.0     24.4      875.4     36.79     6.25
SO SRCPARAM   BASE59B      5.0     24.4      875.4     36.79     6.25

SO SRCPARAM   BASE95A      5.0     24.4      890.4     34.63     6.25
SO SRCPARAM   BASE95B      5.0     24.4      890.4     34.63     6.25

SO SRCPARAM   LD7535A      5.0     24.4      878.7     30.97     6.25
SO SRCPARAM   LD7535B      5.0     24.4      878.7     30.97     6.25

SO SRCPARAM   LD7559A      5.0     24.4      888.2     30.45     6.25
SO SRCPARAM   LD7559B      5.0     24.4      888.2     30.45     6.25
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SO SRCPARAM   LD7595A     5.0    24.4      905.4     29.14     6.25
SO SRCPARAM   LD7595B     5.0    24.4      905.4     29.14     6.25

SO SRCPARAM   LD5035A     5.0    24.4      904.3     26.24     6.25
SO SRCPARAM   LD5035B     5.0    24.4      904.3     26.24     6.25

SO SRCPARAM   LD5059A     5.0    24.4      913.2     25.94     6.25
SO SRCPARAM   LD5059B     5.0    24.4      913.2     25.94     6.25

SO SRCPARAM   LD5095A     5.0    24.4      922.0     24.93     6.25
SO SRCPARAM   LD5095B     5.0    24.4      922.0     24.93     6.25

SO SRCPARAM   HPM35A      5.0    24.4      871.5     38.31     6.25
SO SRCPARAM   HPM35B      5.0    24.4      871.5     38.31     6.25

SO SRCPARAM   HPM59A      5.0    24.4      883.2     37.34     6.25
SO SRCPARAM   HPM59B      5.0    24.4      883.2     37.34     6.25

SO SRCPARAM   HPM95A      5.0    24.4      898.7     36.12     6.25
SO SRCPARAM   HPM95B      5.0    24.4      898.7     36.12     6.25

SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35A-BASE95A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35A-BASE95A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID BASE35A-BASE95A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035A-LD7595A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035A-LD7595A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID LD5035A-LD7595A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT BASE35B-BASE95B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35B-BASE95B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35B-BASE95B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID BASE35B-BASE95B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035B-LD7595B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035B-LD7595B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035B-LD7595B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID LD5035B-LD7595B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT HPM35A-HPM95A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT HPM35A-HPM95A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT HPM35A-HPM95A        0.00     0.00     0.00     0.00     0.00     0.00
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SO BUILDHGT HPM35A-HPM95A        0.00   6.71   6.71   6.71  16.76  16.76
SO BUILDHGT HPM35A-HPM95A       16.76  16.76  16.76   6.71  16.76  16.76
SO BUILDHGT HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35A-HPM95A        0.00  14.26  13.91  13.13  15.58  10.41
SO BUILDWID HPM35A-HPM95A        9.71  11.38  15.58  13.65  14.17   0.00
SO BUILDWID HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35A-HPM95A        0.00  14.26  13.91  13.13  15.58  15.26
SO BUILDWID HPM35A-HPM95A       14.93  15.58  15.58  13.65  14.86  13.67
SO BUILDWID HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00

SO BUILDHGT HPM35B-HPM95B        0.00   6.71   6.71   6.71  16.76   6.71
SO BUILDHGT HPM35B-HPM95B        6.71   6.71  16.76   6.71   6.71   0.00
SO BUILDHGT HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDHGT HPM35B-HPM95B       16.76  16.76  16.76   6.71  16.76  16.76
SO BUILDHGT HPM35B-HPM95B       16.76  16.76  16.76   6.71   6.71   0.00
SO BUILDHGT HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35B-HPM95B        0.00  14.26  13.91  13.13  15.58  10.41
SO BUILDWID HPM35B-HPM95B        9.71  11.38  15.58  13.65  14.17   0.00
SO BUILDWID HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35B-HPM95B       13.08  14.44  15.35  13.13  15.58  15.26
SO BUILDWID HPM35B-HPM95B       14.93  15.58  15.58  13.65  14.17   0.00
SO BUILDWID HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00

SO EMISUNIT    .100000E+07 (GRAMS/SEC)          (MICROGRAMS/CUBIC-METER)
SO SRCGROUP BASE35 BASE35A BASE35B
SO SRCGROUP BASE59 BASE59A BASE59B
SO SRCGROUP BASE95 BASE95A BASE95B
SO SRCGROUP LD7535 LD7535A LD7535B
SO SRCGROUP LD7559 LD7559A LD7559B
SO SRCGROUP LD7595 LD7595A LD7595B
SO SRCGROUP LD5035 LD5035A LD5035B
SO SRCGROUP LD5059 LD5059A LD5059B
SO SRCGROUP LD5095 LD5095A LD5095B
SO SRCGROUP HPM35 HPM35A HPM35B
SO SRCGROUP HPM59 HPM59A HPM59B
SO SRCGROUP HPM95 HPM95A HPM95B
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
** POLAR GRID ORIGIN IS MID POINT BETWEEN CT7 AND CT8 STACKS
RE GRIDPOLR POL ORIG  -242.89  -215.68
RE GRIDPOLR POL DIST   1200 1500 2000 2500 3000 3500 4000 5000 6000 8000 10000
RE GRIDPOLR POL DIST  12000 14000 16000 18000 20000 22000 24000 27000 30000
RE GRIDPOLR POL GDIR   36  10.00  10.00
RE GRIDPOLR POL END
** DISCRETE RECEPTOR ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS
** AS USED FOR 8/98 SCA MODELING ANALYSIS
RE DISCPOLR ORIGIN      160.        10
RE DISCPOLR ORIGIN      300.        10
RE DISCPOLR ORIGIN      500.        10
RE DISCPOLR ORIGIN      700.        10
RE DISCPOLR ORIGIN      900.        10
RE DISCPOLR ORIGIN      185.        20
RE DISCPOLR ORIGIN      300.        20
RE DISCPOLR ORIGIN      500.        20
RE DISCPOLR ORIGIN      700.        20
RE DISCPOLR ORIGIN      900.        20
RE DISCPOLR ORIGIN      237.        30
RE DISCPOLR ORIGIN      300.        30
RE DISCPOLR ORIGIN      500.        30
RE DISCPOLR ORIGIN      700.        30
RE DISCPOLR ORIGIN      900.        30
RE DISCPOLR ORIGIN      348.        40
RE DISCPOLR ORIGIN      500.        40
RE DISCPOLR ORIGIN      700.        40
RE DISCPOLR ORIGIN      900.        40
RE DISCPOLR ORIGIN      589.        50
RE DISCPOLR ORIGIN      700.        50
RE DISCPOLR ORIGIN      900.        50
RE DISCPOLR ORIGIN      705.        60
RE DISCPOLR ORIGIN      900.        60
RE DISCPOLR ORIGIN      656.        70
RE DISCPOLR ORIGIN      700.        70
RE DISCPOLR ORIGIN      900.        70
RE DISCPOLR ORIGIN      632.        80
RE DISCPOLR ORIGIN      700.        80
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RE DISCPOLR ORIGIN		900.	80
RE DISCPOLR ORIGIN		600.	90
RE DISCPO'R ORIGIN		700.	90
RE DISCPOLR ORIGIN		900.	90
RE DISCPOLR ORIGIN		556.	100
RE DISCPOLR ORIGIN		700.	100
RE DISCPOLR ORIGIN		900.	100
RE DISCPOLR ORIGIN		577.	110
RE DISCPOLR ORIGIN		700.	110
RE DISCPOLR ORIGIN		900.	110
RE DISCPOLR ORIGIN		511.	120
RE DISCPOLR ORIGIN		700.	120
RE DISCPOLR ORIGIN		900.	120
RE DISCPOLR ORIGIN		471.	130
RE DISCPOLR ORIGIN		500.	130
RE DISCPOLR ORIGIN		700.	130
RE DISCPOLR ORIGIN		900.	130
RE DISCPOLR ORIGIN		450.	140
RE DISCPOLR ORIGIN		500.	140
RE DISCPOLR ORIGIN		700.	140
RE DISCPOLR ORIGIN		900.	140
RE DISCPOLR ORIGIN		451.	150
RE DISCPOLR ORIGIN		500.	150
RE DISCPOLR ORIGIN		700.	150
RE DISCPOLR ORIGIN		900.	150
RE DISCPOLR ORIGIN		467.	160
RE DISCPOLR ORIGIN		500.	160
RE DISCPOLR ORIGIN		700.	160
RE DISCPOLR ORIGIN		900.	160
RE DISCPOLR ORIGIN		492.	170
RE DISCPOLR ORIGIN		500.	170
RE DISCPOLR ORIGIN		700.	170
RE DISCPOLR ORIGIN		900.	170
RE DISCPOLR ORIGIN		535.	180
RE DISCPOLR ORIGIN		700.	180
RE DISCPOLR ORIGIN		900.	180
RE DISCPOLR ORIGIN		607.	190
RE DISCPOLR ORIGIN		700.	190
RE DISCPOLR ORIGIN		900.	190
RE DISCPOLR ORIGIN		727.	200
RE DISCPOLR ORIGIN		900.	200
RE DISCPOLR ORIGIN		941.	210
RE DISCPOLR ORIGIN		906.	220
RE DISCPOLR ORIGIN		919.	230
RE DISCPOLR ORIGIN		1023.	240
RE DISCPOLR ORIGIN		951.	250
RE DISCPOLR ORIGIN		558.	260
RE DISCPOLR ORIGIN		700.	260
RE DISCPOLR ORIGIN		900.	260
RE DISCPOLR ORIGIN		367.	270
RE DISCPOLR ORIGIN		500.	270
RE DISCPOLR ORIGIN		700.	270
RE DISCPOLR ORIGIN		900.	270
RE DISCPOLR ORIGIN		233.	280
RE DISCPOLR ORIGIN		300.	280
RE DISCPOLR ORIGIN		500.	280
RE DISCPOLR ORIGIN		700.	280
RE DISCPOLR ORIGIN		900.	280
RE DISCPOLR ORIGIN		188.	290
RE DISCPOLR ORIGIN		300.	290
RE DISCPOLR ORIGIN		500.	290
RE DISCPOLR ORIGIN		700.	290
RE DISCPOLR ORIGIN		900.	290
RE DISCPOLR ORIGIN		162.	300
RE DISCPOLR ORIGIN		300.	300
RE DISCPOLR ORIGIN		500.	300
RE DISCPOLR ORIGIN		700.	300
RE DISCPOLR ORIGIN		900.	300
RE DISCPOLR ORIGIN		146.	310
RE DISCPOLR ORIGIN		300.	310
RE DISCPOLR ORIGIN		500.	310
RE DISCPOLR ORIGIN		700.	310
RE DISCPOLR ORIGIN		900.	310
RE DISCPOLR ORIGIN		137.	320
RE DISCPOLR ORIGIN		300.	320
RE DISCPOLR ORIGIN		500.	320
RE DISCPOLR ORIGIN		700.	320

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RE DISCPOLR ORIGIN      900.        320
RE DISCPOLR ORIGIN      133.        330
RE DISCPOLR ORIGIN      300.        330
RE DISCPOLR ORIGIN      500.        330
RE DISCPOLR ORIGIN      700.        330
RE DISCPOLR ORIGIN      900.        330
RE DISCPOLR ORIGIN      132.        340
RE DISCPOLR ORIGIN      300.        340
RE DISCPOLR ORIGIN      500.        340
RE DISCPOLR ORIGIN      700.        340
RE DISCPOLR ORIGIN      900.        340
RE DISCPOLR ORIGIN      136.        350
RE DISCPOLR ORIGIN      300.        350
RE DISCPOLR ORIGIN      500.        350
RE DISCPOLR ORIGIN      700.        350
RE DISCPOLR ORIGIN      900.        350
RE DISCPOLR ORIGIN      145.        360
RE DISCPOLR ORIGIN      300.        360
RE DISCPOLR ORIGIN      500.        360
RE DISCPOLR ORIGIN      700.        360
RE DISCPOLR ORIGIN      900.        360
RE FINISHED

ME STARTING
ME INPUTFIL P:\MET\FMYTPA87.MET
ME ANEMHGHT    20 FEET
ME SURFDATA  12835  1987            FTMYERS
ME UAIRDATA  12842  1987            RUSKIN
ME WINDCATS    1.54    3.09    5.14    8.23    10.80
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST
OU FINISHED
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CO STARTING
CO TITLEONE 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS          7/14/00
CO TITLETWO SIGNIFICANT IMPACT ANALYSIS, EVERGLADES NP, GENERIC 10G/S, NAT. GAS
CO MODELOPT DFAULT CONC   RURAL NOCMPL
CO AVERTIME PERIOD 24 8 3 1
CO POLLUTID GEN
CO DCAYCOEF   .000000
CO RUNORNOT RUN
CO FINISHED

SO STARTING

** Source Location Cards:
** MODELING ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS, NOT A STACK
** LOCATION IS USED FOR POLAR DISCRETE RECEPTORS.
SO LOCATION  ORIGIN   POINT   0.00      0.00    0.00
SO SRCPARAM  ORIGIN    0.0    10.0      500.0     30.00    10.00

**  CT STACK LETTER CODE
** -----------------------
**  A -  CT7 (NORTH) STACK
**  B -  CT8 (SOUTH) STACK
**          SRCID SRCTYP          XS          YS       ZS
**   UTM                          (m)         (m)      (m)
SO LOCATION  BASE35A  POINT    422100      2952900   0.0
SO LOCATION  BASE35B  POINT    422100      2952900   0.0

SO LOCATION  BASE59A  POINT    422100      2952900   0.0
SO LOCATION  BASE59B  POINT    422100      2952900   0.0

SO LOCATION  BASE95A  POINT    422100      2952900   0.0
SO LOCATION  BASE95B  POINT    422100      2952900   0.0

SO LOCATION  LD7535A  POINT    422100      2952900   0.0
SO LOCATION  LD7535B  POINT    422100      2952900   0.0

SO LOCATION  LD7559A  POINT    422100      2952900   0.0
SO LOCATION  LD7559B  POINT    422100      2952900   0.0

SO LOCATION  LD7595A  POINT    422100      2952900   0.0
SO LOCATION  LD7595B  POINT    422100      2952900   0.0

SO LOCATION  LD5035A  POINT    422100      2952900   0.0
SO LOCATION  LD5035B  POINT    422100      2952900   0.0

SO LOCATION  LD5059A  POINT    422100      2952900   0.0
SO LOCATION  LD5059B  POINT    422100      2952900   0.0

SO LOCATION  LD5095A  POINT    422100      2952900   0.0
SO LOCATION  LD5095B  POINT    422100      2952900   0.0


SO LOCATION  HPM35A   POINT    422100      2952900   0.0
SO LOCATION  HPM35B   POINT    422100      2952900   0.0

SO LOCATION  HPM59A   POINT    422100      2952900   0.0
SO LOCATION  HPM59B   POINT    422100      2952900   0.0

SO LOCATION  HPM95A   POINT    422100      2952900   0.0
SO LOCATION  HPM95B   POINT    422100      2952900   0.0
** Source Parameter Cards:
** POINT:   SRCID           QS     HS        TS        VS        DS
**                         (g/s)   (m)       (K)       (m/s)     (m)
SO SRCPARAM   BASE35A      5.0    24.4      863.7     37.86     6.25
SO SRCPARAM   BASE35B      5.0    24.4      863.7     37.86     6.25

SO SRCPARAM   BASE59A      5.0    24.4      875.4     36.79     6.25
SO SRCPARAM   BASE59B      5.0    24.4      875.4     36.79     6.25

SO SRCPARAM   BASE95A      5.0    24.4      890.4     34.63     6.25
SO SRCPARAM   BASE95B      5.0    24.4      890.4     34.63     6.25

SO SRCPARAM   LD7535A      5.0    24.4      878.7     30.97     6.25
SO SRCPARAM   LD7535B      5.0    24.4      878.7     30.97     6.25

SO SRCPARAM   LD7559A      5.0    24.4      888.2     30.45     6.25
SO SRCPARAM   LD7559B      5.0    24.4      888.2     30.45     6.25
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SO SRCPARAM   LD7595A     5.0    24.4      905.4      29.14      6.25
SO SRCPARAM   LD7595B     5.0    24.4      905.4      29.14      6.25

SO SRCPARAM   LD5035A     5.0    24.4      904.3      26.24      6.25
SO SRCPARAM   LD5035B     5.0    24.4      904.3      26.24      6.25

SO SRCPARAM   LD5059A     5.0    24.4      913.2      25.94      6.25
SO SRCPARAM   LD5059B     5.0    24.4      913.2      25.94      6.25

SO SRCPARAM   LD5095A     5.0    24.4      922.0      24.93      6.25
SO SRCPARAM   LD5095B     5.0    24.4      922.0      24.93      6.25

SO SRCPARAM   HPM35A      5.0    24.4      871.5      38.31      6.25
SO SRCPARAM   HPM35B      5.0    24.4      871.5      38.31      6.25

SO SRCPARAM   HPM59A      5.0    24.4      883.2      37.34      6.25
SO SRCPARAM   HPM59B      5.0    24.4      883.2      37.34      6.25

SO SRCPARAM   HPM95A      5.0    24.4      898.7      36.12      6.25
SO SRCPARAM   HPM95B      5.0    24.4      898.7      36.12      6.25

SO BUILDHGT BASE35A-BASE95A        0.00    6.71    6.71    6.71   16.76    6.71
SO BUILDHGT BASE35A-BASE95A        6.71    6.71   16.76    6.71    6.71    0.00
SO BUILDHGT BASE35A-BASE95A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT BASE35A-BASE95A        0.00    6.71    6.71    6.71   16.76   16.76
SO BUILDHGT BASE35A-BASE95A       16.76   16.76   16.76    6.71   16.76   16.76
SO BUILDHGT BASE35A-BASE95A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID BASE35A-BASE95A        0.00   14.26   13.91   13.13   15.58   10.41
SO BUILDWID BASE35A-BASE95A        9.71   11.38   15.58   13.65   14.17    0.00
SO BUILDWID BASE35A-BASE95A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID BASE35A-BASE95A        0.00   14.26   13.91   13.13   15.58   15.26
SO BUILDWID BASE35A-BASE95A       14.93   15.58   15.58   13.65   14.86   13.67
SO BUILDWID BASE35A-BASE95A        0.00    0.00    0.00    0.00    0.00    0.00

SO BUILDHGT LD5035A-LD7595A        0.00    6.71    6.71    6.71   16.76    6.71
SO BUILDHGT LD5035A-LD7595A        6.71    6.71   16.76    6.71    6.71    0.00
SO BUILDHGT LD5035A-LD7595A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT LD5035A-LD7595A        0.00    6.71    6.71    6.71   16.76   16.76
SO BUILDHGT LD5035A-LD7595A       16.76   16.76   16.76    6.71   16.76   16.76
SO BUILDHGT LD5035A-LD7595A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID LD5035A-LD7595A        0.00   14.26   13.91   13.13   15.58   10.41
SO BUILDWID LD5035A-LD7595A        9.71   11.38   15.58   13.65   14.17    0.00
SO BUILDWID LD5035A-LD7595A        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID LD5035A-LD7595A        0.00   14.26   13.91   13.13   15.58   15.26
SO BUILDWID LD5035A-LD7595A       14.93   15.58   15.58   13.65   14.86   13.67
SO BUILDWID LD5035A-LD7595A        0.00    0.00    0.00    0.00    0.00    0.00

SO BUILDHGT BASE35B-BASE95B        0.00    6.71    6.71    6.71   16.76    6.71
SO BUILDHGT BASE35B-BASE95B        6.71    6.71   16.76    6.71    6.71    0.00
SO BUILDHGT BASE35B-BASE95B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT BASE35B-BASE95B       16.76   16.76   16.76    6.71   16.76   16.76
SO BUILDHGT BASE35B-BASE95B       16.76   16.76   16.76    6.71    6.71    0.00
SO BUILDHGT BASE35B-BASE95B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID BASE35B-BASE95B        0.00   14.26   13.91   13.13   15.58   10.41
SO BUILDWID BASE35B-BASE95B        9.71   11.38   15.58   13.65   14.17    0.00
SO BUILDWID BASE35B-BASE95B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID BASE35B-BASE95B       13.08   14.44   15.35   13.13   15.58   15.26
SO BUILDWID BASE35B-BASE95B       14.93   15.58   15.58   13.65   14.17    0.00
SO BUILDWID BASE35B-BASE95B        0.00    0.00    0.00    0.00    0.00    0.00

SO BUILDHGT LD5035B-LD7595B        0.00    6.71    6.71    6.71   16.76    6.71
SO BUILDHGT LD5035B-LD7595B        6.71    6.71   16.76    6.71    6.71    0.00
SO BUILDHGT LD5035B-LD7595B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDHGT LD5035B-LD7595B       16.76   16.76   16.76    6.71   16.76   16.76
SO BUILDHGT LD5035B-LD7595B       16.76   16.76   16.76    6.71    6.71    0.00
SO BUILDHGT LD5035B-LD7595B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID LD5035B-LD7595B        0.00   14.26   13.91   13.13   15.58   10.41
SO BUILDWID LD5035B-LD7595B        9.71   11.38   15.58   13.65   14.17    0.00
SO BUILDWID LD5035B-LD7595B        0.00    0.00    0.00    0.00    0.00    0.00
SO BUILDWID LD5035B-LD7595B       13.08   14.44   15.35   13.13   15.58   15.26
SO BUILDWID LD5035B-LD7595B       14.93   15.58   15.58   13.65   14.17    0.00
SO BUILDWID LD5035B-LD7595B        0.00    0.00    0.00    0.00    0.00    0.00

SO BUILDHGT HPM35A-HPM95A        0.00    6.71    6.71    6.71   16.76    6.71
SO BUILDHGT HPM35A-HPM95A        6.71    6.71   16.76    6.71    6.71    0.00
SO BUILDHGT HPM35A-HPM95A        0.00    0.00    0.00    0.00    0.00    0.00
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SO BUILDHGT HPM35A-HPM95A        0.00   6.71   6.71   6.71  16.76  16.76
SO BUILDHGT HPM35A-HPM95A       16.76  16.76  16.76   6.71  16.76  16.76
SO BUILDHGT HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35A-HPM95A        0.00  14.26  13.91  13.13  15.58  10.41
SO BUILDWID HPM35A-HPM95A        9.71  11.38  15.58  13.65  14.17   0.00
SO BUILDWID HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35A-HPM95A        0.00  14.26  13.91  13.13  15.58  15.26
SO BUILDWID HPM35A-HPM95A       14.93  15.58  15.58  13.65  14.86  13.67
SO BUILDWID HPM35A-HPM95A        0.00   0.00   0.00   0.00   0.00   0.00

SO BUILDHGT HPM35B-HPM95B        0.00   6.71   6.71   6.71  16.76   6.71
SO BUILDHGT HPM35B-HPM95B        6.71   6.71  16.76   6.71   6.71   0.00
SO BUILDHGT HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDHGT HPM35B-HPM95B       16.76  16.76  16.76   6.71  16.76  16.76
SO BUILDHGT HPM35B-HPM95B       16.76  16.76  16.76   6.71   6.71   0.00
SO BUILDHGT HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35B-HPM95B        0.00  14.26  13.91  13.13  15.58  10.41
SO BUILDWID HPM35B-HPM95B        9.71  11.38  15.58  13.65  14.17   0.00
SO BUILDWID HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00
SO BUILDWID HPM35B-HPM95B       13.08  14.44  15.35  13.13  15.58  15.26
SO BUILDWID HPM35B-HPM95B       14.93  15.58  15.58  13.65  14.17   0.00
SO BUILDWID HPM35B-HPM95B        0.00   0.00   0.00   0.00   0.00   0.00

SO EMISUNIT    .100000E+07 (GRAMS/SEC)         (MICROGRAMS/CUBIC-METER)
SO SRCGROUP BASE35 BASE35A BASE35B
SO SRCGROUP BASE59 BASE59A BASE59B
SO SRCGROUP BASE95 BASE95A BASE95B
SO SRCGROUP LD7535 LD7535A LD7535B
SO SRCGROUP LD7559 LD7559A LD7559B
SO SRCGROUP LD7595 LD7595A LD7595B
SO SRCGROUP LD5035 LD5035A LD5035B
SO SRCGROUP LD5059 LD5059A LD5059B
SO SRCGROUP LD5095 LD5095A LD5095B
SO SRCGROUP HPM35 HPM35A HPM35B
SO SRCGROUP HPM59 HPM59A HPM59B
SO SRCGROUP HPM95 HPM95A HPM95B
SO FINISHED

RE STARTING
RE DISCCART   557000.00 2789000.00
RE DISCCART   556600.00 2792000.00
RE DISCCART   556000.00 2796000.00
RE DISCCART   553000.00 2796500.00
RE DISCCART   548000.00 2796500.00
RE DISCCART   542700.00 2796500.00
RE DISCCART   542700.00 2800000.00
RE DISCCART   542700.00 2805000.00
RE DISCCART   542700.00 2810000.00
RE DISCCART   542000.00 2811000.00
RE DISCCART   541300.00 2814000.00
RE DISCCART   542700.00 2816000.00
RE DISCCART   544100.00 2820000.00
RE DISCCART   543500.00 2824600.00
RE DISCCART   545000.00 2829000.00
RE DISCCART   545700.00 2832200.00
RE DISCCART   546200.00 2835700.00
RE DISCCART   548600.00 2837500.00
RE DISCCART   550300.00 2839000.00
RE DISCCART   545000.00 2839000.00
RE DISCCART   540000.00 2839000.00
RE DISCCART   550500.00 2844000.00
RE DISCCART   545000.00 2844000.00
RE DISCCART   540000.00 2844000.00
RE DISCCART   550300.00 2848600.00
RE DISCCART   545000.00 2848600.00
RE DISCCART   540000.00 2848600.00
RE DISCCART   535000.00 2848600.00
RE DISCCART   530000.00 2848600.00
RE DISCCART   525000.00 2848600.00
RE DISCCART   520000.00 2848600.00
RE DISCCART   514500.00 2848600.00
RE DISCCART   514500.00 2843000.00
RE DISCCART   514500.00 2838000.00
RE DISCCART   514500.00 2832500.00
RE DISCCART   510000.00 2832500.00
RE DISCCART   505000.00 2832500.00
RE DISCCART   500000.00 2832500.00
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RE DISCCART   495000.00 2832500.00
RE DISCCART   494500.00 2837000.00
RE DISCCART   491500.00 2841000.00
RE DISCCART   488500.00 2845500.00
RE DISCCART   483000.00 2848500.00
RE DISCCART   480000.00 2852500.00
RE DISCCART   475000.00 2854000.00
RE DISCCART   473500.00 2857000.00
RE DISCCART   473500.00 2860000.00
RE DISCCART   469000.00 2860000.00
RE DISCCART   464000.00 2860000.00
RE DISCCART   459500.00 2863200.00
RE DISCCART   454000.00 2863200.00
RE FINISHED

ME STARTING
ME INPUTFIL P:\MET\FMYTPA87.MET
ME ANEMHGHT    20 FEET
ME SURFDATA  12835  1987            FTMYERS
ME UAIRDATA  12842  1987            RUSKIN
ME WINDCATS    1.54     3.09     5.14     8.23    10.80
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST
OU FINISHED
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CO STARTING
CO TITLEONE 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS          7/14/00
CO TITLETWO SIGNIFICANT IMPACT ANALYSIS, SITE VICINITY, GENERIC 10G/S, FUEL OIL
CO MODELOPT DFAULT CONC   RURAL NOCMPL
CO AVERTIME PERIOD 24 8 3 1
CO POLLUTID GEN
CO DCAYCOEF   .000000
CO RUNORNOT RUN
CO FINISHED

SO STARTING

** Source Location Cards:
** MODELING ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS, NOT A STACK
** LOCATION IS USED FOR POLAR DISCRETE RECEPTORS.
SO LOCATION  ORIGIN   POINT   0.00      0.00    0.00
SO SRCPARAM  ORIGIN    0.0    10.0      500.0     30.00    10.00

**  CT STACK LETTER CODE
** -----------------------
**  A -  CT7 (NORTH) STACK
**  B -  CT8 (SOUTH) STACK
**          SRCID SRCTYP        XS          YS       ZS
**   UTM                        (m)         (m)      (m)
SO LOCATION  BASE35A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE35B  POINT    -233.95     -236.72   0.0

SO LOCATION  BASE59A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE59B  POINT    -233.95     -236.72   0.0

SO LOCATION  BASE95A  POINT    -251.82     -194.64   0.0
SO LOCATION  BASE95B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7535A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7535B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7559A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7559B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD7595A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD7595B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5035A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5035B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5059A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5059B  POINT    -233.95     -236.72   0.0

SO LOCATION  LD5095A  POINT    -251.82     -194.64   0.0
SO LOCATION  LD5095B  POINT    -233.95     -236.72   0.0
** Source Parameter Cards:
** POINT:   SRCID           QS      HS        TS         VS         DS
**                         (g/s)    (m)       (K)        (m/s)      (m)
SO SRCPARAM   BASE35A      5.0     24.4      852.0      39.08      6.25
SO SRCPARAM   BASE35B      5.0     24.4      852.0      39.08      6.25

SO SRCPARAM   BASE59A      5.0     24.4      865.4      37.92      6.25
SO SRCPARAM   BASE59B      5.0     24.4      865.4      37.92      6.25

SO SRCPARAM   BASE95A      5.0     24.4      883.7      35.23      6.25
SO SRCPARAM   BASE95B      5.0     24.4      883.7      35.23      6.25

SO SRCPARAM   LD7535A      5.0     24.4      878.2      31.49      6.25
SO SRCPARAM   LD7535B      5.0     24.4      878.2      31.49      6.25

SO SRCPARAM   LD7559A      5.0     24.4      887.0      30.94      6.25
SO SRCPARAM   LD7559B      5.0     24.4      887.0      30.94      6.25

SO SRCPARAM   LD7595A      5.0     24.4      903.2      29.69      6.25
SO SRCPARAM   LD7595B      5.0     24.4      903.2      29.69      6.25

SO SRCPARAM   LD5035A      5.0     24.4      904.3      26.58      6.25
SO SRCPARAM   LD5035B      5.0     24.4      904.3      26.58      6.25

SO SRCPARAM   LD5059A      5.0     24.4      912.0      26.30      6.25
SO SRCPARAM   LD5059B      5.0     24.4      912.0      26.30      6.25
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SO SRCPARAM   LD5095A     5.0    24.4       922.0      25.48      6.25
SO SRCPARAM   LD5095B     5.0    24.4       922.0      25.48      6.25

SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35A-BASE95A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35A-BASE95A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID BASE35A-BASE95A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035A-LD7595A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035A-LD7595A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID LD5035A-LD7595A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT BASE35B-BASE95B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35B-BASE95B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35B-BASE95B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID BASE35B-BASE95B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035B-LD7595B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035B-LD7595B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035B-LD7595B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID LD5035B-LD7595B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00

SO EMISUNIT    .100000E+07 (GRAMS/SEC)          (MICROGRAMS/CUBIC-METER)
SO SRCGROUP BASE35 BASE35A BASE35B
SO SRCGROUP BASE59 BASE59A BASE59B
SO SRCGROUP BASE95 BASE95A BASE95B
SO SRCGROUP LD7535 LD7535A LD7535B
SO SRCGROUP LD7559 LD7559A LD7559B
SO SRCGROUP LD7595 LD7595A LD7595B
SO SRCGROUP LD5035 LD5035A LD5035B
SO SRCGROUP LD5059 LD5059A LD5059B
SO SRCGROUP LD5095 LD5095A LD5095B
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
** POLAR GRID ORIGIN IS MID POINT BETWEEN CT7 AND CT8 STACKS
RE GRIDPOLR POL ORIG  -242.89  -215.68
RE GRIDPOLR POL DIST   1200 1500 2000 2500 3000 3500 4000 5000 6000 8000 10000
RE GRIDPOLR POL DIST  12000 14000 16000 18000 20000 22000 24000 27000 30000
RE GRIDPOLR POL GDIR   36  10.00  10.00
RE GRIDPOLR POL END
** DISCRETE RECEPTOR ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS
** AS USED FOR 8/98 SCA MODELING ANALYSIS
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RE DISCPOLR ORIGIN      160.        10
RE DISCPOLR ORIGIN      300.        10
RE DISCPOLR ORIGIN      500.        10
RE DISCPOLR ORIGIN      700.        10
RE DISCPOLR ORIGIN      900.        10
RE DISCPOLR ORIGIN      185.        20
RE DISCPOLR ORIGIN      300.        20
RE DISCPOLR ORIGIN      500.        20
RE DISCPOLR ORIGIN      700.        20
RE DISCPOLR ORIGIN      900.        20
RE DISCPOLR ORIGIN      237.        30
RE DISCPOLR ORIGIN      300.        30
RE DISCPOLR ORIGIN      500.        30
RE DISCPOLR ORIGIN      700.        30
RE DISCPOLR ORIGIN      900.        30
RE DISCPOLR ORIGIN      348.        40
RE DISCPOLR ORIGIN      500.        40
RE DISCPOLR ORIGIN      700.        40
RE DISCPOLR ORIGIN      900.        40
RE DISCPOLR ORIGIN      589.        50
RE DISCPOLR ORIGIN      700.        50
RE DISCPOLR ORIGIN      900.        50
RE DISCPOLR ORIGIN      705.        60
RE DISCPOLR ORIGIN      900.        60
RE DISCPOLR ORIGIN      656.        70
RE DISCPOLR ORIGIN      700.        70
RE DISCPOLR ORIGIN      900.        70
RE DISCPOLR ORIGIN      632.        80
RE DISCPOLR ORIGIN      700.        80
RE DISCPOLR ORIGIN      900.        80
RE DISCPOLR ORIGIN      600.        90
RE DISCPOLR ORIGIN      700.        90
RE DISCPOLR ORIGIN      900.        90
RE DISCPOLR ORIGIN      556.       100
RE DISCPOLR ORIGIN      700.       100
RE DISCPOLR ORIGIN      900.       100
RE DISCPOLR ORIGIN      577.       110
RE DISCPOLR ORIGIN      700.       110
RE DISCPOLR ORIGIN      900.       110
RE DISCPOLR ORIGIN      511.       120
RE DISCPOLR ORIGIN      700.       120
RE DISCPOLR ORIGIN      900.       120
RE DISCPOLR ORIGIN      471.       130
RE DISCPOLR ORIGIN      500.       130
RE DISCPOLR ORIGIN      700.       130
RE DISCPOLR ORIGIN      900.       130
RE DISCPOLR ORIGIN      450.       140
RE DISCPOLR ORIGIN      500.       140
RE DISCPOLR ORIGIN      700.       140
RE DISCPOLR ORIGIN      900.       140
RE DISCPOLR ORIGIN      451.       150
RE DISCPOLR ORIGIN      500.       150
RE DISCPOLR ORIGIN      700.       150
RE DISCPOLR ORIGIN      900.       150
RE DISCPOLR ORIGIN      467.       160
RE DISCPOLR ORIGIN      500.       160
RE DISCPOLR ORIGIN      700.       160
RE DISCPOLR ORIGIN      900.       160
RE DISCPOLR ORIGIN      492.       170
RE DISCPOLR ORIGIN      500.       170
RE DISCPOLR ORIGIN      700.       170
RE DISCPOLR ORIGIN      900.       170
RE DISCPOLR ORIGIN      535.       180
RE DISCPOLR ORIGIN      700.       180
RE DISCPOLR ORIGIN      900.       180
RE DISCPOLR ORIGIN      607.       190
RE DISCPOLR ORIGIN      700.       190
RE DISCPOLR ORIGIN      900.       190
RE DISCPOLR ORIGIN      727.       200
RE DISCPOLR ORIGIN      900.       200
RE DISCPOLR ORIGIN      941.       210
RE DISCPOLR ORIGIN      906.       220
RE DISCPOLR ORIGIN      919.       230
RE DISCPOLR ORIGIN     1023.       240
RE DISCPOLR ORIGIN      951.       250
RE DISCPOLR ORIGIN      558.       260
RE DISCPOLR ORIGIN      700.       260
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RE DISCPOLR ORIGIN      900.       260
RE DISCPOLR ORIGIN      367.       270
RE DISCPOLR ORIGIN      500.       270
RE DISCPOLR ORIGIN      700.       270
RE DISCPOLR ORIGIN      900.       270
RE DISCPOLR ORIGIN      233.       280
RE DISCPOLR ORIGIN      300.       280
RE DISCPOLR ORIGIN      500.       280
RE DISCPOLR ORIGIN      700.       280
RE DISCPOLR ORIGIN      900.       280
RE DISCPOLR ORIGIN      188.       290
RE DISCPOLR ORIGIN      300.       290
RE DISCPOLR ORIGIN      500.       290
RE DISCPOLR ORIGIN      700.       290
RE DISCPOLR ORIGIN      900.       290
RE DISCPOLR ORIGIN      162.       300
RE DISCPOLR ORIGIN      300.       300
RE DISCPOLR ORIGIN      500.       300
RE DISCPOLR ORIGIN      700.       300
RE DISCPOLR ORIGIN      900.       300
RE DISCPOLR ORIGIN      146.       310
RE DISCPOLR ORIGIN      300.       310
RE DISCPOLR ORIGIN      500.       310
RE DISCPOLR ORIGIN      700.       310
RE DISCPOLR ORIGIN      900.       310
RE DISCPOLR ORIGIN      137.       320
RE DISCPOLR ORIGIN      300.       320
RE DISCPOLR ORIGIN      500.       320
RE DISCPOLR ORIGIN      700.       320
RE DISCPOLR ORIGIN      900.       320
RE DISCPOLR ORIGIN      133.       330
RE DISCPOLR ORIGIN      300.       330
RE DISCPOLR ORIGIN      500.       330
RE DISCPOLR ORIGIN      700.       330
RE DISCPOLR ORIGIN      900.       330
RE DISCPOLR ORIGIN      132.       340
RE DISCPOLR ORIGIN      300.       340
RE DISCPOLR ORIGIN      500.       340
RE DISCPOLR ORIGIN      700.       340
RE DISCPOLR ORIGIN      900.       340
RE DISCPOLR ORIGIN      136.       350
RE DISCPOLR ORIGIN      300.       350
RE DISCPOLR ORIGIN      500.       350
RE DISCPOLR ORIGIN      700.       350
RE DISCPOLR ORIGIN      900.       350
RE DISCPOLR ORIGIN      145.       360
RE DISCPOLR ORIGIN      300.       360
RE DISCPOLR ORIGIN      500.       360
RE DISCPOLR ORIGIN      700.       360
RE DISCPOLR ORIGIN      900.       360
RE FINISHED

ME STARTING
ME INPUTFIL P:\MET\FMYTPA87.MET
ME ANEMHGHT    20 FEET
ME SURFDATA  12835  1987          FTMYERS
ME UAIRDATA  12842  1987          RUSKIN
ME WINDCATS    1.54    3.09    5.14    8.23    10.80
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST
OU FINISHED
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CO STARTING
CO TITLEONE 1987 FPL FT. MYERS PROPOSED 2 SIMPLE CYCLE CTS          7/14/00
CO TITLETWO SIGNIFICANT IMPACT ANALYSIS, EVERGLADES NP, GENERIC 10G/S, FUEL OIL
CO MODELOPT DFAULT CONC   RURAL NOCMPL
CO AVERTIME PERIOD 24 8 3 1
CO POLLUTID GEN
CO DCAYCOEF    .000000
CO RUNORNOT RUN
CO FINISHED

SO STARTING

** Source Location Cards:
** MODELING ORIGIN IS MIDWAY BETWEEN HRSG 3 AND 4 STACK LOCATIONS, NOT A STACK
** LOCATION IS USED FOR POLAR DISCRETE RECEPTORS.
SO LOCATION  ORIGIN   POINT   0.00      0.00     0.00
SO SRCPARAM  ORIGIN    0.0    10.0      500.0     30.00    10.00

**  CT STACK LETTER CODE
** ------------------------
**  A -  CT7 (NORTH) STACK
**  B -  CT8 (SOUTH) STACK
**          SRCID SRCTYP          XS          YS       ZS
**   UTM                          (m)         (m)      (m)
SO LOCATION  BASE35A  POINT     422100     2952900   0.0
SO LOCATION  BASE35B  POINT     422100     2952900   0.0

SO LOCATION  BASE59A  POINT     422100     2952900   0.0
SO LOCATION  BASE59B  POINT     422100     2952900   0.0

SO LOCATION  BASE95A  POINT     422100     2952900   0.0
SO LOCATION  BASE95B  POINT     422100     2952900   0.0

SO LOCATION  LD7535A  POINT     422100     2952900   0.0
SO LOCATION  LD7535B  POINT     422100     2952900   0.0

SO LOCATION  LD7559A  POINT     422100     2952900   0.0
SO LOCATION  LD7559B  POINT     422100     2952900   0.0

SO LOCATION  LD7595A  POINT     422100     2952900   0.0
SO LOCATION  LD7595B  POINT     422100     2952900   0.0

SO LOCATION  LD5035A  POINT     422100     2952900   0.0
SO LOCATION  LD5035B  POINT     422100     2952900   0.0

SO LOCATION  LD5059A  POINT     422100     2952900   0.0
SO LOCATION  LD5059B  POINT     422100     2952900   0.0

SO LOCATION  LD5095A  POINT     422100     2952900   0.0
SO LOCATION  LD5095B  POINT     422100     2952900   0.0
** Source Parameter Cards:
** POINT:   SRCID          QS      HS        TS        VS        DS
**                        (g/s)    (m)       (K)      (m/s)      (m)
SO SRCPARAM   BASE35A      5.0     24.4      852.0     39.08     6.25
SO SRCPARAM   BASE35B      5.0     24.4      852.0     39.08     6.25

SO SRCPARAM   BASE59A      5.0     24.4      865.4     37.92     6.25
SO SRCPARAM   BASE59B      5.0     24.4      865.4     37.92     6.25

SO SRCPARAM   BASE95A      5.0     24.4      883.7     35.23     6.25
SO SRCPARAM   BASE95B      5.0     24.4      883.7     35.23     6.25

SO SRCPARAM   LD7535A      5.0     24.4      878.2     31.49     6.25
SO SRCPARAM   LD7535B      5.0     24.4      878.2     31.49     6.25

SO SRCPARAM   LD7559A      5.0     24.4      887.0     30.94     6.25
SO SRCPARAM   LD7559B      5.0     24.4      887.0     30.94     6.25

SO SRCPARAM   LD7595A      5.0     24.4      903.2     29.69     6.25
SO SRCPARAM   LD7595B      5.0     24.4      903.2     29.69     6.25

SO SRCPARAM   LD5035A      5.0     24.4      904.3     26.58     6.25
SO SRCPARAM   LD5035B      5.0     24.4      904.3     26.58     6.25

SO SRCPARAM   LD5059A      5.0     24.4      912.0     26.30     6.25
SO SRCPARAM   LD5059B      5.0     24.4      912.0     26.30     6.25
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SO SRCPARAM   LD5095A     5.0    24.4       922.0      25.48      6.25
SO SRCPARAM   LD5095B     5.0    24.4       922.0      25.48      6.25

SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35A-BASE95A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35A-BASE95A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35A-BASE95A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35A-BASE95A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID BASE35A-BASE95A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID BASE35A-BASE95A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035A-LD7595A        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035A-LD7595A        0.00     6.71     6.71     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035A-LD7595A        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035A-LD7595A        0.00    14.26    13.91    13.13    15.58    15.26
SO BUILDWID LD5035A-LD7595A       14.93    15.58    15.58    13.65    14.86    13.67
SO BUILDWID LD5035A-LD7595A        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT BASE35B-BASE95B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT BASE35B-BASE95B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT BASE35B-BASE95B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID BASE35B-BASE95B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID BASE35B-BASE95B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID BASE35B-BASE95B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID BASE35B-BASE95B        0.00     0.00     0.00     0.00     0.00     0.00

SO BUILDHGT LD5035B-LD7595B        0.00     6.71     6.71     6.71    16.76     6.71
SO BUILDHGT LD5035B-LD7595B        6.71     6.71    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71    16.76    16.76
SO BUILDHGT LD5035B-LD7595B       16.76    16.76    16.76     6.71     6.71     0.00
SO BUILDHGT LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B        0.00    14.26    13.91    13.13    15.58    10.41
SO BUILDWID LD5035B-LD7595B        9.71    11.38    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00
SO BUILDWID LD5035B-LD7595B       13.08    14.44    15.35    13.13    15.58    15.26
SO BUILDWID LD5035B-LD7595B       14.93    15.58    15.58    13.65    14.17     0.00
SO BUILDWID LD5035B-LD7595B        0.00     0.00     0.00     0.00     0.00     0.00

SO EMISUNIT    .100000E+07 (GRAMS/SEC)          (MICROGRAMS/CUBIC-METER)
SO SRCGROUP BASE35 BASE35A BASE35B
SO SRCGROUP BASE59 BASE59A BASE59B
SO SRCGROUP BASE95 BASE95A BASE95B
SO SRCGROUP LD7535 LD7535A LD7535B
SO SRCGROUP LD7559 LD7559A LD7559B
SO SRCGROUP LD7595 LD7595A LD7595B
SO SRCGROUP LD5035 LD5035A LD5035B
SO SRCGROUP LD5059 LD5059A LD5059B
SO SRCGROUP LD5095 LD5095A LD5095B
SO FINISHED

RE STARTING
RE DISCCART   557000.00 2789000.00
RE DISCCART   556600.00 2792000.00
RE DISCCART   556000.00 2796000.00
RE DISCCART   553000.00 2796500.00
RE DISCCART   548000.00 2796500.00
RE DISCCART   542700.00 2796500.00
RE DISCCART   542700.00 2800000.00
RE DISCCART   542700.00 2805000.00
RE DISCCART   542700.00 2810000.00
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RE DISCCART   542000.00 2811000.00
RE DISCCART   541300.00 2814000.00
RE DISCCART   542700.00 2816000.00
RE DISCCART   544100.00 2820000.00
RE DISCCART   543500.00 2824600.00
RE DISCCART   545000.00 2829000.00
RE DISCCART   545700.00 2832200.00
RE DISCCART   546200.00 2835700.00
RE DISCCART   548600.00 2837500.00
RE DISCCART   550300.00 2839000.00
RE DISCCART   545000.00 2839000.00
RE DISCCART   540000.00 2839000.00
RE DISCCART   550500.00 2844000.00
RE DISCCART   545000.00 2844000.00
RE DISCCART   540000.00 2844000.00
RE DISCCART   550300.00 2848600.00
RE DISCCART   545000.00 2848600.00
RE DISCCART   540000.00 2848600.00
RE DISCCART   535000.00 2848600.00
RE DISCCART   530000.00 2848600.00
RE DISCCART   525000.00 2848600.00
RE DISCCART   520000.00 2848600.00
RE DISCCART   514500.00 2848600.00
RE DISCCART   514500.00 2843000.00
RE DISCCART   514500.00 2838000.00
RE DISCCART   514500.00 2832500.00
RE DISCCART   510000.00 2832500.00
RE DISCCART   505000.00 2832500.00
RE DISCCART   500000.00 2832500.00
RE DISCCART   495000.00 2832500.00
RE DISCCART   494500.00 2837000.00
RE DISCCART   491500.00 2841000.00
RE DISCCART   488500.00 2845500.00
RE DISCCART   483000.00 2848500.00
RE DISCCART   480000.00 2852500.00
RE DISCCART   475000.00 2854000.00
RE DISCCART   473500.00 2857000.00
RE DISCCART   473500.00 2860000.00
RE DISCCART   469000.00 2860000.00
RE DISCCART   464000.00 2860000.00
RE DISCCART   459500.00 2863200.00
RE DISCCART   454000.00 2863200.00
RE FINISHED

ME STARTING
ME INPUTFIL P:\MET\FMYTPA87.MET
ME ANEMHGHT    20 FEET
ME SURFDATA  12835  1987           FTMYERS
ME UAIRDATA  12842  1987           RUSKIN
ME WINDCATS    1.54     3.09     5.14     8.23    10.80
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST
OU FINISHED
```

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy
A. A. Linero 12/15

FROM: Teresa Heron TH

DATE: December 15, 2000

SUBJECT: FPL Ft. Myers 340 MW Simple Cycle Project
DEP File No. 0710002-009-AC and PSD-FI-298

Attached is the final package for the Ft. Myers 340 MW Simple Cycle Combustion Turbine Project. The application is for installation of two simple cycle units to provide additional power at the Fort Myers Plant.

Each unit is a 170 MW General Electric MS7241FA gas-fired combustion turbine-generator. The project also includes two heaters to heat the natural gas prior to use and individual stacks for each emission unit.

Each unit will be allowed to operate 8760 hours per year including 500 hours in high power mode (HPM) and 500 hours on fuel oil. NOX and CO emissions will be controlled by DLN-2.6 combustors capable of achieving 9 ppmvd for each pollutant while firing natural gas. Permitted emissions will be as follows in ppmvd.

Case	**NO_X**	**CO**	**VOC (BACT)**
Base (natural gas)	10.5	9	1.5
High Power Mode	15	15	1.5
Fuel Oil	42	20	3.5

Emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM), and particulate matter (PM/PM_{10}) will be very low because of the inherently clean pipeline quality natural gas and few hours of operation on fuel oil.

We have determined on a preliminary basis that the project nets out of PSD for all pollutants (except for VOC) because of the very substantial emissions reductions resulting from the on-going repowering project at the site.

We recommend your approval.

AAL/th

Attachments

HLR 90 13 1/20/01

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 1453 3136

Article Sent To:

Mr. William Reichel

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Name *(Please Print Clearly) (to be completed by mailer)*
Mr. William Reichel
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+4
Fort Myers, FL 33905

PS Form 3800, July 1999 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. William Reichel
General Manager
FPL Fort Myers Plant
PO Box 430
Fort Myers, FL 33905

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* MARY K. RUSSELL
B. Date of Delivery 12-28-00
C. Signature Mary K. Russell ☐ Agent ☐ Addressee
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 3136

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

RECEIVED

NOV 09 2000

BUREAU OF AIR REGULATION

NEWS-PRESS

Published every morning – Daily and Sunday
Fort Myers, Florida

Affidavit of Publication

STATE OF FLORIDA
COUNTY OF LEE

Before the undersigned authority, personally appeared
Kieanna Henry
who on oath says that he/she is the
Asst. Legal Clerk of the News-Press, a daily newspaper, published at Fort Myers, in Lee County, Florida; that the attached copy of advertisement, being a
Legal Notice
in the matter of **DEP Air Construction Permit to Fla Power & Light**
in the ______________________________ Court
was published in said newspaper in the issues of
November 3, 2000

Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County, Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisement; and affiant further says that he/she 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.

Kieanna Henry

Sworn to and subscribed before me this

3rd day of Novmeber 2000 by

Kieanna Henry
personally known to me or who has produced

____

as identification, and who did or did not take an oath.

Notary Public Brenda Leighton

Print Name ______________________________

My commission Expires:

Brenda Leighton
MY COMMISSION # CC808905 EXPIRES
February 14, 2003
BONDED THRU TROY FAIN INSURANCE, INC

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 0710002-009-AC (PSD-FL-298)
Florida Power & Light Fort Myers Plant 340 Megawatt Simple Cycle Project
Lee County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality to Florida Power & Light Company (FPL). The permit is to construct two 170 megawatt (MW) natural gas and distillate fuel oil-fired combustion turbine-electrical generators with 80-foot stacks and natural gas heaters at the Fort Myers Plant near Tice, Lee County. A Best Available Control Technology (BACT) determination was required only for emissions of volatile organic compounds (VOC) 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 33902.

The new units will be nominal 170 MW General Electric PG7241FA combustion turbines-electrical generators operating in simple cycle. Each unit will be permitted to operate 8,760 hours per year while firing natural gas. Within the 8,760 hours, each unit will be permitted to burn maximum 0.05 percent sulfur distillate fuel oil for 500 hours and to operate in high power modes (peaking or power augmentation) for 500 hours.

The BACT emission limits for VOC are 1.5 parts per million, dry (ppmvd), when burning gas and 3.5 ppmv, wet, when burning fuel oil. A BACT determination was not required for the other key pollutants such as nitrogen oxides NOX), carbon monoxide (CO), particulate matter (PM/PM10), sulfuric acid mist (SAM), and sulfur dioxide (SO2). Emissions of the non-BACT pollutants will be controlled to low levels by use of inherently clean fuels, combustion techniques such as Dry Low NOX, or wet injection.

The maximum potential annual emissions in tons per year (tpy) are summarized below. Because of an ongoing repowering project involving shut down of existing residual oil-fired units, there will be net contemporaneous emission reductions for all pollutants except VOC and CO. PSD review was required only for VOC.

Pollutants; Project In-

AFFIDAVIT OF PUBLICATION

NEWS-PRESS
"Serving Southwest Florida Since 1884"

creases (tpy); Contemporaneous Changes (tpy); Net Changes (tpy)
PM/PM10; 91; -293; -202
SAM; 4; -894; -890
SO2; 91; -20,400; -20,309
NOX; 741; -5,217; -4,476
VOC; 26; 36; 62
CO; 280; -238; 42

Ambient air pollutant concentration increases caused by the simple cycle project, irrespective of the repowering project, will be less than the applicable 'significant impact levels.'

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 and requests for public meetings 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.' 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.

This Fort Myers 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 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)488-0114 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. The Department's technical evaluations and Draft Permit can be viewed at **www.dep.state.fl.us/air/permitting.htm** by clicking on Construction Permits.

Nov 3 No. 54202

7099 3400 0000 1453 1583

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. William Reichel, Gen. Mgr.

Postage	$	10/26/00 FPL, Ft. Myers
Certified Fee		
Return Receipt Fee (Endorsement Required)		Postmark Here
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	$	

Name (Please Print Clearly) (to be completed by mailer)
Mr. William Reichel, Gen. Mgr

Street, Apt. No.; or PO Box No.
PO Box 430

City, State, ZIP+4
Ft. Myers, FL 33905

PS Form 3800, July 1999 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. William Reichel, Gen. Mgr.
FPL Fort Myers Plant
PO Box 430
Ft. Myers, FL 33905

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*
B. Date of Delivery 10-31-00

C. Signature
X Mary K. Russell
☐ ~~Agent~~
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 1583

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-99-M-1789

7099 3400 0000 1453 2511

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. William Reichel - FPL Ft. Myers

Postage	$	8/24/00
Certified Fee		Postmark Here
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	$	

Name *(Please Print Clearly) (to be completed by mailer)*
Mr. William Reichel, Gen. Mgr.
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+4
Fort Myers, FL 33905

PS Form 3800, July 1999 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2511

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: JOAN R SMOAK
B. Date of Delivery: 8-29-00

C. Signature
X Joan R Smoak
☐ Agent
☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7099 3400 0000 1453 2726

Article Sent To:
Greg Worley

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Tot	

Postmark Here

Nam
Stree
City,

Mr. Greg Worley
Air, Radiation Technical Branch
US EPA - Region 4
61 Forsyth St.
Atlanta, GA 30303

PS Fo... See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Greg Worley
Air, Radiation Technical Branch
US EPA - Region 4
61 Forsyth St.
Atlanta, GA 30303

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*
B. Date of Delivery 8-17

C. Signature
X [signature] ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2726

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

7099 3400 0000 1453 2757

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
John Bunyak

Postage	$ 0
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark
Here

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
P.O. Box 25287
Denver, CO 80225

PS Form 3800, July 1999 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
P.O. Box 25287
Denver, CO 80225

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*
B. Date of Delivery

C. Signature
X
☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☑ No

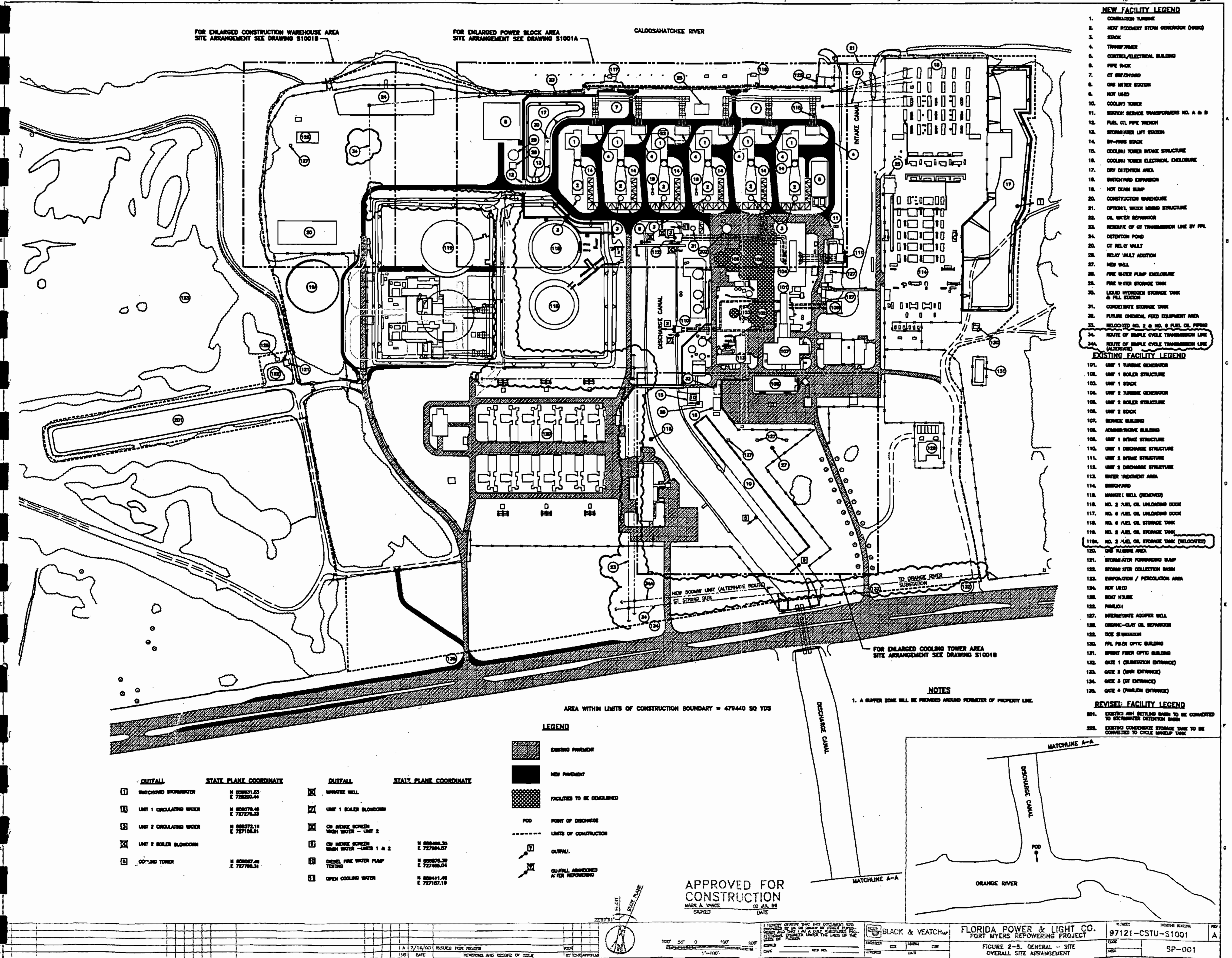
DENVER, CO FED. CENTER BLG. ANNEX
AUG 21 2000
USPS

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1453 2757

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789


FOR ENLARGED CONSTRUCTION WAREHOUSE AREA SITE ARRANGEMENT SEE DRAWING S1001B
FOR ENLARGED POWER BLOCK AREA SITE ARRANGEMENT SEE DRAWING S1001A
CALOOSAHATCHEE RIVER
INTAKE CANAL
DISCHARGE CANAL
NEW 500MW UNIT (ALTERNATE ROUTE)
CT STRING BUS
TO ORANGE RIVER SUBSTATION
FOR ENLARGED COOLING TOWER AREA SITE ARRANGEMENT SEE DRAWING S1001B
AREA WITHIN LIMITS OF CONSTRUCTION BOUNDARY = 479440 SQ YDS
NOTES
1. A BUFFER ZONE WILL BE PROVIDED AROUND PERIMETER OF PROPERTY LINE.
LEGEND
EXISTING PAVEMENT
NEW PAVEMENT
FACILITIES TO BE DEMOLISHED
POD POINT OF DISCHARGE
LIMITS OF CONSTRUCTION
OUTFALL
OUTFALL ABANDONED AFTER REPOWERING
OUTFALL
STATE PLANE COORDINATE
1 SWITCHYARD STORMWATER
2 UNIT 1 CIRCULATING WATER
3 UNIT 2 CIRCULATING WATER
4 UNIT 2 BOILER BLOWDOWN
6 COOLING TOWER
MANATEE WELL
7 UNIT 1 BOILER BLOWDOWN
CW INTAKE SCREEN WASH WATER – UNIT 2
9 CW INTAKE SCREEN WASH WATER – UNITS 1 & 2
10 DIESEL FIRE WATER PUMP TESTING
11 OPEN COOLING WATER
MATCHLINE A–A
DISCHARGE CANAL
ORANGE RIVER
APPROVED FOR CONSTRUCTION
02 JUL 99
SIGNED
DATE
NEW FACILITY LEGEND
1. COMBUSTION TURBINE
2. HEAT RECOVERY STEAM GENERATOR (HRSG)
3. STACK
4. TRANSFORMER
5. CONTROL/ELECTRICAL BUILDING
6. PIPE RACK
7. CT SWITCHYARD
8. GAS METER STATION
9. NOT USED
10. COOLING TOWER
11. STATION SERVICE TRANSFORMERS NO. A & B
12. FUEL OIL PIPE TRENCH
13. STORMWATER LIFT STATION
14. BY-PASS STACK
15. COOLING TOWER INTAKE STRUCTURE
16. COOLING TOWER ELECTRICAL ENCLOSURE
17. DRY DETENTION AREA
18. SWITCHYARD EXPANSION
19. HOT DRAIN SUMP
20. CONSTRUCTION WAREHOUSE
21. OPTIONAL WATER MIXING STRUCTURE
22. OIL WATER SEPARATOR
23. REROUTE OF CT TRANSMISSION LINE BY FPL
24. DETENTION POND
25. CT RELAY VAULT
26. RELAY VAULT ADDITION
27. NEW WELL
28. FIRE WATER PUMP ENCLOSURE
29. FIRE WATER STORAGE TANK
30. LIQUID HYDROGEN STORAGE TANK & FILL STATION
31. CONDENSATE STORAGE TANK
32. FUTURE CHEMICAL FEED EQUIPMENT AREA
33. RELOCATED NO. 2 & NO. 6 FUEL OIL PIPING
34. ROUTE OF SIMPLE CYCLE TRANSMISSION LINE
34A. ROUTE OF SIMPLE CYCLE TRANSMISSION LINE (ALTERNATE)
EXISTING FACILITY LEGEND
101. UNIT 1 TURBINE GENERATOR
102. UNIT 1 BOILER STRUCTURE
103. UNIT 1 STACK
104. UNIT 2 TURBINE GENERATOR
105. UNIT 2 BOILER STRUCTURE
106. UNIT 2 STACK
107. SERVICE BUILDING
108. ADMINISTRATIVE BUILDING
109. UNIT 1 INTAKE STRUCTURE
110. UNIT 1 DISCHARGE STRUCTURE
111. UNIT 2 INTAKE STRUCTURE
112. UNIT 2 DISCHARGE STRUCTURE
113. WATER TREATMENT AREA
114. SWITCHYARD
115. MANATEE WELL (REMOVED)
116. NO. 2 FUEL OIL UNLOADING DOCK
117. NO. 6 FUEL OIL UNLOADING DOCK
118. NO. 6 FUEL OIL STORAGE TANK
119. NO. 2 FUEL OIL STORAGE TANK
119A. NO. 2 FUEL OIL STORAGE TANK (RELOCATED)
120. GAS TURBINE AREA
121. STORMWATER FORWARDING SUMP
122. STORMWATER COLLECTION BASIN
123. EVAPORATION / PERCOLATION AREA
124. NOT USED
125. BOAT HOUSE
126. PAVILION
127. INTERMEDIATE AQUIFER WELL
128. ORGANIC-CLAY OIL SEPARATOR
129. TIDE SUBSTATION
130. FPL FIBER OPTIC BUILDING
131. SPRINT FIBER OPTIC BUILDING
132. GATE 1 (SUBSTATION ENTRANCE)
133. GATE 2 (MAIN ENTRANCE)
134. GATE 3 (CT ENTRANCE)
135. GATE 4 (PAVILION ENTRANCE)
REVISED FACILITY LEGEND
201. EXISTING ASH SETTLING BASIN TO BE CONVERTED TO STORMWATER DETENTION BASIN
202. EXISTING CONDENSATE STORAGE TANK TO BE CONVERTED TO CYCLE MAKEUP TANK
7/14/00 ISSUED FOR REVIEW
REVISIONS AND RECORD OF ISSUE
1"=100'
BLACK & VEATCH LLP
FLORIDA POWER & LIGHT CO.
FORT MYERS REPOWERING PROJECT
FIGURE 2-5. GENERAL – SITE OVERALL SITE ARRANGEMENT
97121-CSTU-S1001
A
SP-001

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

December 28, 2001

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 340 MW Simple Cycle Project
Extension of Expiration Date
DEP File No. 0710002-009-AC (PSD-FL-298)

Dear Mr. Reichel:

The Department received a letter from Mr. Ken Simmons on November 28, 2001, requesting to change the construction completion date of Specific Condition II from August 1, 2002 to June 30, 2003, and to extend the permit expiration date from April 30, 2003 to December 30, 2003.

Per Rule 62-4.080, F.A.C., an extension for a construction permit shall be granted if the applicant can demonstrate reasonable assurances that upon completion, the extended permit will comply with the standards and conditions required by applicable regulations.

We understand that the project did not trigger PSD. It appears that it will still be completed within the applicable "contemporaneous period" that includes the shutdown of the two large residual fuel oil boilers. Therefore we do not plan to review the applicable control technology in conjunction with an extension.

To complete the reasonable assurance requirement allowing extension of the permit, please submit the following information:

1. List the remaining tasks to be performed to complete installation and fine-tuning of plant equipment and the approximate dates for completing those tasks.
2. Identify production and emission testing that needs to be conducted and provide estimated dates for completion of those tasks.
3. Provide a statement (and basis for believing) that the facility will comply with applicable regulation.

If you have any questions regarding this matter, please contact Teresa Heron at 850/921-9529 or teresa.heron@dep.state.fl.us . You can also contact me at 850/921-9523 or alvaro.linero@dep.state.fl.us .

Sincerely,

12/28

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/aal

Cc: Rich Piper, FPL
Ken Kosky, P.E., Golder Associates
Ken Simmons, FPL
Ron Blackburn, DEP SD

"More Protection, Less Process"

Printed on recycled paper.

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. William Reichel
General Manager
FPL Fort Myers Plant
P. O. Box 430
Ft. Myers, FL 33905

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* B. Date of Delivery

C. Signature

X ☐ Agent ☐ Addressee

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PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

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William Reichel
Street, Apt. No.; or PO Box No.
PO Box 430
City, State, ZIP+ 4
Ft. Myers, FL 33905

PS Form 3800, May 2000 See Reverse for Instructions

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

FPL

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NOV 28 2001

BUREAU OF AIR REGULATION

November 27, 2001

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
New Source Review Section
Florida Department of Environmental Protection
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: DEP File No. 0710002-009AC and PSD-FL-298
Fort Myers Power Plant
340 MW Simple Cycle Project

Attention: A. A. Linero, P.E., Administrator, New Source Review Section

Dear Mr. Linero:

This correspondence is submitted to request a change in Condition II. 9. and an extension of the in the expiration date of the above referenced permit. Condition II. 9. of the permit states that construction be completed by August 1, 2002. The actual completion of construction is expected to be on or about June 30, 2003. In order to provide sufficient time for submission of the Title V permit for the project, an extension of the expiration date to December 30, 2003 is requested.

The project is currently commencing construction with the laying of foundations for these units. Prior to this activity, an oil storage tank associated with the existing Fort Myers Plant was moved to the west of the location designated for the simple cycle turbines. In addition to these physical site related activities, the General Electric Frame 7FA turbines have been ordered for the project.

It should be noted that this project was not required to undergo PSD review for NO_2, SO_2 CO or PM/PM_{10}.

Please call if you have questions. Your expeditious handling of this request would be appreciated. I may be contacted at the letterhead address above or via e-mail at k_h_simmons@fpl.com. I can be reached at the following telephone number (561) 691 – 2216.

Sincerely,

K.H. "Ken" Simmons
Manager, New Capacity Projects

cc: Rich Piper, FPL
Kennard Kosky, P.E., Golder Associates

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
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1. Article Addressed to:

Mr. William Reichel
General Manager
FPL Fort Myers Plant
P. O. Box 430
Ft. Myers, FL 33905

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