



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

September 21, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Kent Hedrick  
Supervisor, Air Programs  
Florida Power Corporation  
Post Office Box 14042  
St. Petersburg, Florida 33733

Dear Mr. Hedrick:

PSD-FL-180D

RE: Amendment to Construction Permit  
AC 49-203114 [PSD-FL-180(A)]  
Intercession City Facility

The Department has reviewed your request to amend the subject permit by A) incorporating an ISO corrected nitrogen oxide (NO<sub>x</sub>) emission limit of 57 ppm @ 15% O<sub>2</sub>, B) incorporate a fuel bound nitrogen allowance of 6 ppm, and C) clarify language concerning the application of a heat input vs. ambient temperature curve. The Department's determination on these amendment requests are as follows:

**A. Incorporation of an ISO NO<sub>x</sub> Emission Limit**

Your request to amend the construction permit by incorporating an ISO NO<sub>x</sub> emission limit of 57 ppm @ 15% O<sub>2</sub> is denied.

The Intercession City facility is subject to 40 CFR 60, Subpart GG, which specifically states that no owner or operator shall emit nitrogen oxides which exceed a specific NO<sub>x</sub> STD (40 CFR 60.332(a)(1)). Pursuant to 40 CFR 60.330 and Rule 62-296.800, Florida Administrative Code (F.A.C.), the NO<sub>x</sub> STD for the subject construction permit was established by the best available control technology (BACT) determination to be an allowable NO<sub>x</sub> emission limit of 42 ppm at 15 percent oxygen and on a dry basis. This limit is an allowable/observed value and no mention is made of an ISO NO<sub>x</sub> emission limit. Also, observed values of NO<sub>x</sub> emissions

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are to be corrected to ISO conditions to meet the requirements of 40 CFR 60.335(c)(2) using the equation in 40 CFR 60.335(c)(1). The ambient temperature and specific humidity variables in this equation could create potential situations which would restrict the operations of the facility beyond the intent of the permit. Your statement in this request that we have not permitted you to utilize the GE Mark IV Algorithm, which is an integral part of and was specifically designed for the GE Frame 7EA combustion turbine to correct the water/fuel ratio for different ambient temperatures/specific humidity, seems to be incorrect. The subject construction permit does not specify nor is the intent of the permit to specify design criteria, but to only specify performance criteria.

**B. Fuel Bound Nitrogen (FBN)**

Your request for an FBN allowance of 6 ppm is denied.

Pursuant to 40 CFR.332(a)(1) and (2), and Rule 62-296.800, F.A.C., no owner or operator subject to the provisions of Subpart GG shall cause to be discharged NO<sub>x</sub> emissions which exceed a STD. This STD is equal to the allowable NO<sub>x</sub> emissions (percent by volume at 15 percent oxygen on a dry basis) and is the sum of two values, one of which is the NO<sub>x</sub> emission allowance for fuel bound nitrogen (F) as defined in 40 CFR 60.332(a)(3). The applicant was given a NO<sub>x</sub> emission allowance (F=0) pursuant to 40 CFR 60.332(a)(3) for fuels having a nitrogen content (N) equal to or less than 0.015 percent by weight. To give the applicant an additional NO<sub>x</sub> emission allowance, 6 ppm as requested, would be a relaxation of a standard established by a BACT determination, which is a federally enforceable standard. To relax a federally enforceable standard or to increase allowable NO<sub>x</sub> emissions would require a modification (40 CFR 60.5, 40 CFR 60.14, Rule 62-210.200(39), F.A.C.). In reference to excess emissions resulting from the nitrogen content of the fuel, pursuant to 40 CFR 60.334(c)(1), the nitrogen content of the fuel is for reporting purposes and is not to be used exclusively for compliance/enforcement purposes.

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**C. Manufacturers Heat Input vs. Ambient Temperature Curves**

- Specific Condition No. 4(D)a,b, and c is amended as follows;

**From**

- a) The maximum heat input of 1,144 MMBtu/hr/unit at 20°F (peak load).
- b) The maximum heat input of 1,029 MMBtu/hr/unit at 59°F (peak load).
- c) The maximum heat input of 932 MMBtu/hr/unit at 90°F (peak load).

**To**

- a) The maximum heat input of 1,144 MMBtu/hr/unit at 20°F (peak load). The heat input will be corrected in accordance with Specific Condition No. 14 and the heat input vs. ambient temperature curve in Figure 1L.
- b) Replaced by the heat input vs. ambient temperature curve in Figure 1L, which was developed using actual site specific performance data.
- c) Replaced by the heat input vs. ambient temperature curve in Figure 1L, which was developed using actual site specific performance data.

- Specific Condition No. 14 is amended as follows;

**From**

Test results will be the average of 3 valid runs. The Central District office will be notified at least 30 days in writing in advance of the compliance test(s) pursuant to 40 CFR 60.8. The sources shall operate between 90% and 100% of permitted capacity during the compliance test(s) as adjusted for ambient temperature. Compliance test results shall be

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submitted to the Central District office no later than 45 days after completion pursuant to F.A.C. Rule 17-2.700(8).

To

Test results will be the average of 3 valid runs. The Department's Central District office will be notified at least 30 days in writing in advance of the compliance test(s) pursuant to 40 CFR 60(8). The sources shall operate between 90% and 100% of permitted capacity during the compliance test(s) as adjusted for ambient temperature using Figure 1L. In the event that a combustion turbine does not achieve 95% of the designed heat input capacity as adjusted for average ambient temperature during a compliance test, the entire heat input vs. ambient temperature curve will be adjusted downward by the increment equal to the difference between the design heat input value and 105% of the value reached during the test. The curve will be automatically adjusted upward upon demonstration of compliance at a higher heat input capacity during a subsequent compliance test. Until compliance is demonstrated at a higher heat input capacity during a subsequent compliance test, the combustion turbine shall not be operated at a heat input capacity greater than the adjusted curve values. In no case shall the maximum permitted heat input capacity of 1144 MMBtu/hr/unit at 20°F (peak load) be exceeded. Compliance test results shall be submitted to the Department's Central District office no later than 45 days after completion pursuant to Rule 62-297.570, F.A.C.

D. Attachments to be Incorporated;

- FPC letter dated June 23, 1994.
- FDEP letter dated July 12, 1994.
- FPC letter dated July 26, 1994.
- Figure 1L, Heat Input vs. Ambient Temperature Curve.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida

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32399-2400. Petitions filed by the applicant of the amendment request/application and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other persons must be filed within 14 days of the amendment issuance or within 14 days of their receipt of this amendment, whichever occurs first. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information:

- (a) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
- (g) A statement of the relief sought by petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the request/application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this amendment

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in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This letter amendment must be attached to the construction permit, No. AC 49-203114, and the federal permit, No. PSD-FL-180(A), and shall become part of the permits.

Sincerely,



Howard L. Rhodes  
Director  
Division of Air Resources  
Management

HLR/CSL

Attachment

cc: A. Zahm, CD  
J. Harper, EPA  
J. Bunyak, NPS

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this AMENDMENT and all copies were mailed by certified mail before the close of business on 9/23/94 to the listed persons.

FILING AND ACKNOWLEDGMENT FILED,  
on this date, pursuant to 120.52(11),  
Florida Statutes, with the designated  
Department Clerk, receipt of which is  
hereby acknowledged.

Charlotte J. Hayes 9/23/94  
Clerk Date

**Attachment**

# Florida Power Corporation GE Frame 7EA Combustion Turbines

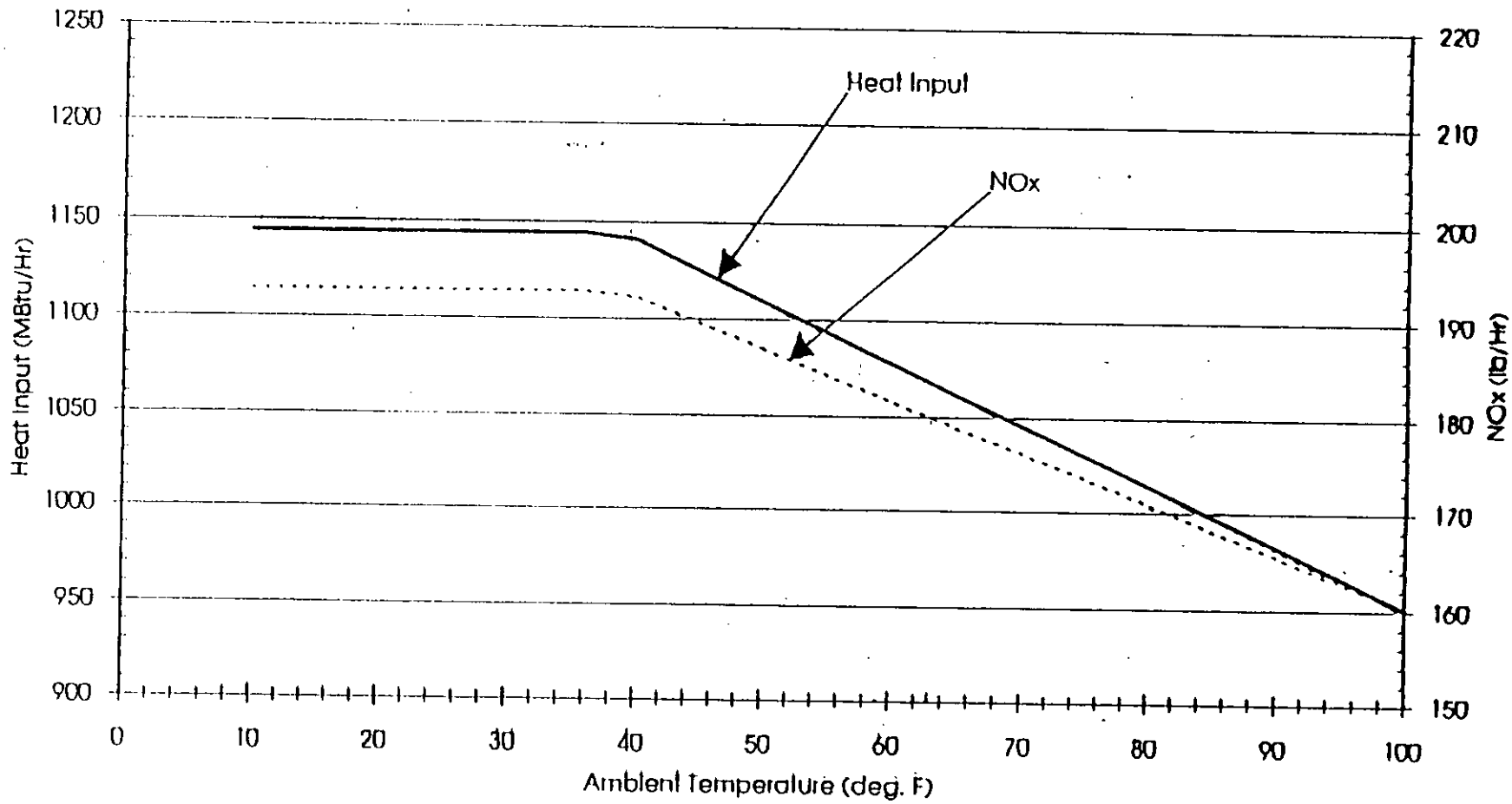


Figure 11  
Florida Power Corporation  
Intercession City Facility  
Heat Input vs. Ambient Temperature Curve



Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Kent Hedrick  
 Supervisor, Air Programs  
 Florida Power Corporation  
 P. O. Box 14042  
 St. Petersburg, FL 33733

4a. Article Number  
 Z 751 859 980

4b. Service Type

Registered       Insured  
 Certified       COD  
 Express Mail       Return Receipt for Merchandise

7. Date of Delivery  
 SEP 28 1994

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

*[Handwritten Signature]*

PS Form 3811, December 1991      U.S. GPO: 1992-323-402      **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 751 859 980



**Receipt for Certified Mail**  
 No Insurance Coverage Provided  
 Do not use for International Mail  
 (See Reverse)

PS Form 3800, March 1993

Sent to Mr. Kent Hedrick, FPC	
Street and No. P. O. Box 14042	
P.O., State and ZIP Code St. Petersburg, FL 33733	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 9-23-94 Permit: AC 49-203114 PSD-FL-180(A)	

Memorandum

Florida Department of  
Environmental Protection

Bruce

TO : Howard Rhodes  
FROM : *John Brown*  
for Clair Fancy  
DATE : September 21, 1994  
SUBJECT: Approval of Construction Permit Amendment  
AC 49-203114 [PSD-FL-180(A)]  
Intercession City Facility

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Attached for your approval and signature is an amendment to the Florida Power Corporation Intercession City Facility construction permit, prepared by the Bureau of Air Regulation. The purpose of this amendment is to clarify language regarding testing requirements and the use of a manufacturer's heat input vs. ambient temperature curve; and, to incorporate the manufacturer's heat input vs. ambient temperature curve into the construction permit. The curve is necessary for correcting heat input during compliance and performance tests. This amendment will not cause an increase in annual allowable emission limits or result in any equipment change.

This amendment is recommended for your approval and signature.

CF/CSL

Attachment