



October 2, 1997

Ms. Kathy Carter
Office of General Counsel
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

RECEIVED

OCT 06 1997

BUREAU OF
AIR REGULATION

Dear Ms. Carter:

RE: Florida Power Corporation, Intercession City Plant
REQUEST FOR EXTENSION OF TIME on the *Intent to Issue Title V Air Operation Permit*,
Draft Permit No. 0970014-001-AV

On August 22, 1997, Florida Power Corporation (FPC) received the above-referenced Intent to Issue Title V Air Operation Permit. A review of the permit conditions has revealed that several issues remain to be resolved. Mr. Scott Osbourn of my staff has had discussions with Mr. Bruce Mitchell of the Department who agreed that an additional extension of time to discuss these issues is appropriate. Therefore, based upon the Department's concurrence and pursuant to Rules 62-103.050 and 28-106.111, Fla. Admin. Code, FPC respectfully requests an extension of time in which to file a petition for an administrative hearing under Sections 120.569 and 120.57, Fla. Stat., up to and including October 10, 1997.

If you should have any questions, please contact Mr. Scott Osbourn at (813) 866-5158.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Jeffrey Pardue".

W. Jeffrey Pardue, C.E.P.
Director, Environmental Services Department
Title V Responsible Official

A handwritten signature in black ink, appearing to read "Robert A. Manning".

Robert A. Manning, Esq. *Jarm*
Hopping Green Sams & Smith

cc: Scott Sheplak, DEP

10/9/97 *Scott Sheplak*
Charles Sojan



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SEP 24 1997
BUREAU OF
AIR REGULATION

September 19, 1997

Ms. Kathy Carter
Office of General Counsel
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Dear Ms. Carter:

RE: Florida Power Corporation, Intercession City Plant
REQUEST FOR EXTENSION OF TIME on Intent to Issue Title V Air Operation Permit
Draft Permit No. 0970014-001-AV

On August 22, 1997, Florida Power Corporation (FPC) received the above-referenced Intent to Issue Title V Air Operation Permit. A review of the permit conditions has revealed that several issues remain to be resolved. Department representatives previously agreed to an extension of time to file a petition until September 19, 1997. Mr. Robert Manning (attorney for FPC) has had discussions with Mr. Scott Sheplak with the Department who agreed that an extension of time for 14 more days to discuss these issues is appropriate. Therefore, based upon the Department's concurrence and pursuant to Rules 62-103.050 and 28-106.111, Fla. Admin. Code, FPC respectfully requests an extension of time in which to file a petition for an administrative hearing on the draft Title V permit under Sections 120.569 and 120.57, Fla. Stat., up to and including October 3, 1997.

If you should have any questions, please contact Mr. Scott Osbourn at (813) 866-5158.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Jeffrey Pardue".

W. Jeffrey Pardue, C.E.P.
Director, Environmental Services Department
Title V Responsible Official

Robert A. Manning, Esq.
Hopping Green Sams & Smith

cc: Scott Sheplak, DEP

9/25/97 Charles Fogar



September 17, 1997

Mr. Scott M. Sheplak, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Sheplak:

RE: Florida Power Corporation, Intercession City Plant
DRAFT Title V Permit No. 0970014-001-AV

On behalf of Florida Power Corporation (FPC), attached are comments regarding the DRAFT Title V permit for the Intercession City Plant as identified above. FPC appreciates the Department's efforts in processing this permit and understands the need to resolve these issues in as timely a manner as possible. In this regard, DEP agreed to grant FPC's Request for Extension of Time until September 19, 1997. If we are unable to reach a resolution of these comments within this time period, we would appreciate the opportunity to file a second Request for Extension of Time.

Please contact me at (813) 866-5158 as soon as you have had a chance to review these comments to set up either a telephone or in-person conference. Thank you for your consideration of our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Osbourn", written in a cursive style.

Scott H. Osbourn
Senior Environmental Engineer

cc: 9/22/97 Clair Fancy, P.E., DEP
Charles Logan, DEP
Ken Kosky, P.E., Golder
Robert Manning, HGSS

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BUREAU OF
AIR REGULATION

**FLORIDA POWER CORPORATION
COMMENTS ON DRAFT TITLE V PERMIT
INTERCESSION CITY PLANT**

General Comments

1. FPC understands that Appendix TV-1, Title V Conditions, may continue to be revised. FPC requests that its Title V permit reflect the most up-to-date version of this Appendix.

2. FPC understands that DEP will publish the Intent to Issue Title V Air Operation Permit. Because the applicant is ultimately responsible for the publication of the Intent to Issue, FPC requests that DEP provide a copy of the Notice intended to be published, as well as proof of publication.

Section I., Facility Information, Subsection A.

1. The description states that the FPC's Title V application for the Intercession City Plant was received on "June 18, 1996." The correct submittal date was "June 14, 1996."

Section II., Facility-wide Conditions.

1. Condition 2. The word "not" was apparently inadvertently added, and should be deleted from, the second line of this Condition.

2. Condition 3. For clarity and to make this Condition specific to FPC's Intercession City Plant, FPC requests that Condition 2. be edited as follows:

~~Except as otherwise provided in this permit for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause~~

Also, because the reference to Chapter 62-297 in the last sentence of Condition 2. appears to be misplaced, FPC requests Condition 2. be edited as follows: **"EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C."**

3. Condition 6. In the context of this permit, how does DEP intend to respond to EPA's comments regarding the need to change the phrase "exempt" to "insignificant"?

4. Condition 7. For clarity, FPC requests that the first sentence of this Condition be edited as follows: **"The permittee shall not allow no person to store, pump,"** Also, because this condition is not included in Florida's SIP (based on our research), and to be consistent with other permits issued by DEP, this condition should be marked as "Not Federally Enforceable."

Section III. Subsection A.

1. For clarity, FPC requests the following revision to the description: (fourth line) "These units are not subject to ~~any~~ the following federal requirements, NSPS - 40 CFR 60"

2. Condition A.5. FPC requests that this Condition be deleted because it is redundant to Condition 3., and there is no other authority for making this a unit-specific applicable requirement.

3. Condition A.12. The ASTM methods should be updated as follows to reflect the current methods: ". . . ASTM ~~D4292-90~~ D4292-90 (1995), or both ASTM D4057-88 and ASTM D ~~129-91~~ 95, or the latest edition(s)."

4. Condition A.13. For clarity, the first clause in this condition ("When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method") should be deleted because the permit specifies EPA Method 9, pursuant to Condition A.10.

5. Condition A.14. Because there is an applicable standard for visible emissions, paragraph (a)4.a. should be edited as follows: "**Visible emissions, ~~if there is an applicable standard.~~**"

Section III. Subsection B.

1. FPC requests that the description be edited as follows: (second line) "of ~~92.9~~ 96.3 megawatts/CT and 171 megawatts/CT, respectively. . . ." Also, the description should be revised to clarify that the Siemens unit began commercial operation in 1996, instead of 1994.

2. Condition B.1. As reflected in comment 1. above, the generator nameplate rating should be 96.3, instead of 92.9.

3. Condition B.3. FPC requests that the second sentence of this Condition (which imposes a gallons per hour limit on fuel oil consumption) be deleted because the sulfur dioxide emissions are already sufficiently limited by the imposition of a maximum heat input limit, an hours of operation limit, and a fuel oil sulfur limit.

4. Condition B.4. This Condition incorrectly places a unit-specific limit on hours of operation, whereas the existing permit imposes an aggregate limit. Accordingly, FPC requests the first sentence of this Condition be deleted and the following sentence added: "Total hours of operation for all units contained in this Subsection B. shall not exceed 16,950 hours per year."

5. Condition B.5. This Condition does not contain any citation as to the authority for its inclusion in the permit. This citation should include AC 49-303114/PSD-FL-180(A).

6. Conditions B.7. and B.8. These units should not be subject to individual tons per year emission limitations. The tons per year number listed in Table 1 of the PSD permit was an "aggregate" number; individual units' annual emissions were limited only by the fact that they could not emit, in combination with the other three CT's, emissions in excess of the aggregate annual limits. Accordingly, the individual tpy limits for NO_x, SO₂, PM/PM₁₀, VOC, CO, and SAM in Conditions B.7. - B.12. should be deleted and an aggregate limit for all four units for each of these pollutants should be inserted.

7. Condition B.7. The standard for the H₂SO₄ (New No.2 F.O. - max. 0.2% by wt.) should be revised to be listed under oil usage, and not for gas.

8. Condition B.14. In accordance with FPC's letter to the Department dated September 10, 1997, FPC requests that this Condition be revised to include the following: "The permittee shall monitor sulfur content of the natural gas in accordance with the customized fuel monitoring schedule in Attachment __. Monitoring of the natural gas sulfur content is not required."

9. Conditions B.16. through B.20. The citation to Rule 62-296.320(4)(b)4.a. is incorrect and should be deleted. Also, the citation to AC 49-20311/PSD-FL-180(A) should be included in each of these Conditions.

10. Condition B.20. and B.29. Based on a previous amendment to the construction permit, VOC testing is not required so long as compliance with the CO limit is demonstrated. These Conditions should be revised accordingly.

11. Condition B.24. The reference to sulfur dioxide in this Condition should be deleted because the equation for sulfur dioxide is not included. Also, paragraph (b) of this Condition should be deleted because it only applies to the initial performance test.

12. Condition B.25. For clarity, FPC requests the following revision: "The permittee shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: ASTM D2880-96 or the latest edition shall be used . . . and ASTM D1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92 or the latest edition(s) shall be used for the sulfur content of gaseous fuels [incorporated by reference in 40 CFR 60.17]."

13. Condition B.28. In accordance with PSD-FL-180(A), this Condition should be revised to include the heat input/temperature curves.

14. Condition B.29. Paragraph (a)4.a. of this Condition should be revised to reflect the additional limits beyond visible emissions applicable to this unit.

15. Condition B.30. For clarity, the first clause in paragraph (a)2. of this Condition ("When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method") should be deleted because the permit specifies EPA Method 9, pursuant to Condition B.17.

16. Condition B.38. FPC requests that this Condition clarify that, in accordance with 40 CFR § 60.332(a), the determination of periods of excess emissions for nitrogen oxides take into account the fuel-bound nitrogen content of the fuel being fired. Also, in paragraph b., the sulfur content was incorrectly listed as 0.05. FPC requests that this sulfur content be corrected to 0.2.

Section IV. Acid Rain Part

1. Condition 1.a. should reference the actual application that FPC submitted rather than DEP's form number.

2. Condition 4. This Condition should be moved to the facility-wide section of this permit because it applies to every unit and every applicable requirement, not just to the Acid Rain requirements.

Table 1-1, Air Pollutant Emission Allowables and Terms

1. The citation to Rule 62-212.400(6), F.A.C. is incorrect because these limits are not BACT limits.

Tables 1-2 and 1-3, Air Pollutant Emission Allowables and Terms

1. This Table should be edited in accordance with the specific comments made above. For example, for Units 7-10, the hours of operation per year limitation (per unit) should be deleted, and the tons per year emission limits should be listed as an aggregate tons per year limit, and not an individual unit tons per year limit.

Table 2-1, Compliance Testing Requirements

1. This Table should be edited in accordance with the specific comments made above. For example, the specific requirements regarding PM and VOC testing should be included. Also, the citation to Condition B.4. does not make sense.



September 5, 1997

Ms. Kathy Carter
Office of General Counsel
Florida Department of Environmental Protection
2800 Blair Stone Rd.
Tallahassee, FL 32399-2400

Dear Ms. Carter:

RE: Florida Power Corporation, Intercession City Plant
REQUEST FOR EXTENSION OF TIME on Intent to Issue Title V Air Operation Permit
Draft Permit No. 0970014-001-AV

On August 22, 1997, Florida Power Corporation (FPC) received the above-referenced Intent to Issue Title V Air Operation Permit. A review of the permit conditions has revealed that several issues remain to be resolved. Mr. Scott Osbourn of my staff has had discussions with Department representatives who agreed that an extension of time for 14 days to discuss these issues is appropriate. Therefore, based upon the Department's concurrence and pursuant to Rules 62-103.050 and 28-106.111, Fla. Admin. Code, FPC respectfully requests an extension of time in which to file a petition for an administrative hearing on the draft Title V permit under Sections 120.569 and 120.57, Fla. Stat., up to and including September 19, 1997.

If you should have any questions, please contact Mr. Scott Osbourn at (813) 866-5158.

Sincerely,

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W. Jeffrey Pardue, C.E.P.
Director, Environmental Services Department
Title V Responsible Official

A handwritten signature in black ink, appearing to read "Robert A. Manning".

Robert A. Manning, Esq.
Hopping Green Sams & Smith

cc: Scott Sheplak, DEP
Charles Logan, DEP

STATE OF FLORIDA, DEP, BUREAU OF AIR REGULATION, TITLE V SECTION
TELEPHONE CONVERSATION RECORD

TO: Charles Logan copy to: Bruce Mitchell

FROM: SCOTT SHEPLAK

DATE: 01/29/48 TIME: ~p.m.

WITH: Len Kozlov + Anatoliy Subolevskiy

REPRESENTING: Central District

TELEPHONE NO.: SC 325-2240

SUBJECT: KPC- Intravision City
FINAL Permit No. 0970014-001-AV

SUMMARY: The frequency of testing for NOX, CO, etc. does not appear to be in the permit for CTS 7, 8, 9, & 10.

I reviewed the permit over the phone with the Central District. I could not find the frequency for those pollutants. It appears condition number B.29 (a) 4. is where the pollutants/text should be specified.

Further action

I informed the Central District that we would fix the permit if it is not in the permit. Table 2-1 contains the frequency. If it is in the permit we need to call them.

① Please look into and inform me. & done

② Also, the FINAL permit needs to be posted onto the website. Please route the files to Elizabeth Walker.

Gave to E. Walker on 2/6 to Post → file # 0970014f

Appendix H-1, Permit History/ID Number Changes

Florida Power Corporation
Intercession City

Facility ID No.: 0970014-001-AV

Permit History (for tracking purposes):

<u>E.U.</u> <u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue</u> <u>Date</u>	<u>Expiration</u> <u>Date</u>	<u>Extended</u> <u>Date</u>	<u>Revised</u> <u>Date(s)</u>
-001	Combustion Turbine Peaking Unit #1	AO49-176549	07/20/90	01/15/96		
-002	Combustion Turbine Peaking Unit #2	AO49-176549	07/20/90	01/15/96		
-003	Combustion Turbine Peaking Unit #3	AO49-176549	07/20/90	01/15/96		
-004	Combustion Turbine Peaking Unit #4	AO49-176549	07/20/90	01/15/96		
-005	Combustion Turbine Peaking Unit #5	AO49-176549	07/20/90	01/15/96		
-006	Combustion Turbine Peaking Unit #6	AO49-176549	07/20/90	01/15/96		
-007	92.9 MW Simple Cycle Gas CT	AC49-203114/	08/17/92	12/31/95		10/06/93
-008	92.9 MW Simple Cycle Gas CT	PSD-FL-180				11/15/93
-009	92.9 MW Simple Cycle Gas CT					07/15/94
-010	185.5 MW Simple Cycle Gas CT					01/20/95
-011	185.5 MW Simple Cycle Gas CT					

(if applicable) ID Number Changes (for tracking purposes):

From: Facility ID No.: 30ORL4900014

To: Facility ID No.: 0970014

Notes:

1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}



file

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767 • 407-894-7555

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

Alex Alexander, Deputy Assistant Secretary

NOTICE OF PERMIT

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

Attention: Patsy Y. Baynard, Director
Environmental & Licensing

Osceola County - AP
Combustion Turbine Peaking Units
No. 1, 2, 3, 4, 5, and 6 - Intercession City



Dear Ms. Baynard:

Enclosed is Permit Number A049-176549, dated 1-20-90, to operate the above referenced sources, issued pursuant to Section 403.087, Florida Statutes.

Persons whose substantial interests are affected by this permit have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing), unless the right to petition has been waived. The petition must conform to the requirements of Chapters 17-103 F.A.C., and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee 32399-2400, within fourteen (14) days of receipt of this notice. Failure to file a petition within that time constitutes a waiver of any right such person has to an administrative determination pursuant to Section 120.57, Florida Statutes.

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 petitioner wants the department to take with respect to the department's action or proposed action.

This Order (Permit) is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraph. Upon the timely filing of a petition this Permit will not be effective until further Order of the Department.

Any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C.M.C. Alexander

A. Alexander
Deputy Assistant Secretary
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

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

Debra B. Booker 7/20/90
Clerk Date

187
AA/jtj

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 7-20-90 to the listed persons, by D. Jones.



Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767 • 407-894-7555

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary
Alex Alexander, Deputy Assistant Secretary

Permittee:
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Attention: Patsy Y. Baynard, Director
Environmental & Licensing

I. D. Number:
Permit/Certification
Number: A049-176549
Date of Issue: 7/20/90
Expiration Date: June 25, 1995
County: Osceola
Latitude/Longitude:
28°15'38"N/81°32'48"W
UTM: 17-446.3 KmE; 3126.0 KmN
Project: Combustion Turbine
Peaking Units No. 1, 2, 3, 4, 5,
and 6 - Intercession City

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

The permittee can operate Combustion Turbine Peaking Units No. 1, 2, 3, 4, 5, and 6. Each unit consists of two (2) gas turbines, which burn #2 fuel oil with a total maximum heat input rate of 708 MMBTU/hour and one (1) electric generator (Model No. FT4C-1DLF), rated at a maximum of 51,000 KW.

These sources are located 3.5 miles east of Intercession City on State Road 532 in Osceola County, Florida.

General Conditions are attached to be distributed to the permittee only.

PERMITTEE:

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727 or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agent, employees, servants or representatives.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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 does not constitute a waiver of 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.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority of 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.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, 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.
6. The permittee shall at all times 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.
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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
 - a. Having access to and copying any records that must be kept under the conditions of the permit.
 - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sampling or monitoring any substances or parameters at any location reasonable necessary to assure compliance with this permit or department rules.Reasonable time may depend on the nature of the concern being investigated.
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 notify and provide the department with the following information:
 - a. a description of and cause of non-compliance; and

PERMITTEE:

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

- b. the period of non-compliance, including exact 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 revocation of this permit.

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 arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.73 and 403.111, Florida Statutes.
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.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
- () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnished 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 submitted or corrected promptly.

PERMITTEE:
Florida Power Corporation

Attention: Patsy Y. Baynard, Director
Environmental & Licensing

I. D. Number:
Permit/Certification Number:
AO49-176549
Date of Issue:
Expiration Date: June 25, 1995

GENERAL CONDITIONS:

16. No objectionable odors will be allowed, as per Rule 17-2.620(2), F.A.C.
17. This permit does not preclude compliance with any applicable local permitting requirements and regulations.

SPECIFIC CONDITIONS:

OPERATING LIMITS

1. Each of the six sources are permitted to operate under the following conditions:
 - a) Each source will be fired with a maximum of 123 bbls. of #2 fuel oil.
 - b) Each source will have a maximum heat input of 708 MMBTU/hour.
 - c) The rated maximum electrical power of each source is 63,000 Kva at power factor = 0.9 and an ambient temperature of 59°F.
 - d) Each source is permitted to operate 24 hours/day, 7 days/week, and 52 weeks/year.

EMISSION LIMITS

2. The visible emissions for each source must comply with Rule 17-2.610(2)F.A.C. and the compliance test must be conducted in accordance with Rule 17-2.700(6)(b)9, (DER Method #9) F.A.C.

COMPLIANCE TESTING

3. Each source must be tested for visible emissions at yearly intervals from the date of January 20, 1990, in accordance with Rule 17-2.700(6)(b)9, (DER Method #9)F.A.C.
4. This office (Florida Department of Environmental Regulation, Air Permitting, Orlando) shall be notified at least fifteen (15) days in advance of the compliance tests so that we can witness them (Rule 17-2.700(2)(a)5, F.A.C.).

PERMITTEE:
Florida Power Corporation

Attention: Patsy Y. Baynard, Director
Environmental & Licensing

I. D. Number:
Permit/Certification Number:
AO49-176549
Date of Issue:
Expiration Date: June 25, 1995

5. This plant is required to operate within 90 to 100 percent of permitted capacity during the compliance tests.
6. The required test report shall be filed with the department as soon as practical but no later than 45 days after the last sampling run of each test is completed (Rule 17-2.700(7)(a),(b) and (c), F.A.C.).

REPORTS

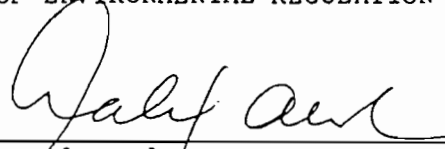
7. Each calendar year on or before March 1, submit for each source, an Annual Operations Report DER Form 17-1.202(6) for the preceding calendar year in accordance with Rule 17-4.14, F.A.C.

EXPIRATION DATE

8. An operation permit renewal must be submitted at least 60 days prior to the expiration date of this permit (Rule 17-4.09, F.A.C.).

ISSUED 7-20-80

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

c m c

A. Alexander
Deputy Assistant Secretary
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803



Department of Environmental Protection

RECEIVED

AUG 17 1995

Environmental Svcs
Department

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 10, 1995

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Services Department H2G
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Pardue:

RE: Intercession City-DEP Permit No. AC 49-203114 and PSD-Fl-180
Request to Burn Natural Gas in Units P7 through P11

The Department is in receipt of your April 28, May 31, and July 7, 1995, letters requesting a permit modification to burn natural gas as a supplemental fuel in combustion turbines P7 through P11. The Bureau of Air Regulation has evaluated your request and approves the burning of natural gas for these turbines since there will not be an increase in either lb/hr/unit or tons/yr/unit of the permitted emission rates. Consequently, the following new condition will be added:

SPECIFIC CONDITION No. 1

These emission units are allowed to burn natural gas. Emissions of each pollutant while burning natural gas shall not exceed the following limits:

GE PG7111(EA), 4 units

	<u>lb/hr/unit</u>	<u>tons/yr/unit</u>
PM	7.50	12.71
SO2	2.99	5.06
CO	21.30	36.10
NOx	107.00	181.37 and 25 ppmvd at 15% oxygen
VOC	3.00	5.08
H ₂ SO ₄	0.44	0.75

Mr. W. Jeffrey Pardue
August 10, 1995
Page Two

SIEMENS V84.3, 1 unit

	<u>lb/hr</u>	<u>ton/yr</u>	
PM	7.5	12.71	
SO2	4.22	7.15	
CO	30.9	52.37	
NOx	149	252.56	and 25 ppmvd at 15% oxygen
VOC	5.3	8.98	
H2SO4	0.64	1.08	

<u>GE Frame 7EA Units (P7-P10)</u>	<u>Temp. (F)</u>	<u>Heat Input (MMBtu/hr)</u>
	20	1,159
	59	1,048
	90	955
 Siemens Unit (P11)	20	1,609
	59	1,477
	95	1,355

Allowable emissions are calculated at 59°F. Annual emissions rates are based on 3390 hours per year.

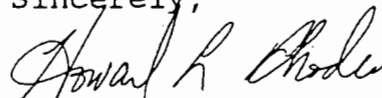
BACT Determination

The BACT determination is hereby revised to include the burning of natural gas at a NOx emission standard of 25 ppmvd at 15%O₂.

It is the Department's understanding that natural gas is available on an interruptible basis at this time. In the future, if natural gas becomes available on a non-interruptible basis, the Department may reassess the BACT and may require stricter NOx control over a reasonable period of time.

A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC49-203114, PSD-FL-180.

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/th/t

Mr. W. Jeffrey Pardue
August 10, 1995
Page Three

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **PERMIT AMENDMENT** and all copies were mailed by certified mail before the close of business on 8-11-95 to the listed persons.

Clerk Stamp
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.

Kuni Jober 8-11-95
Clerk Date

Copies to be furnished to:

cc: Charles Collins, CD
Mike Kennedy, FPC



Lawton Chiles
Governor

Department of Environmental Protection

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

Virginia B. Wetherell
Secretary

July 17, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Services Department H2G
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Pardue:

Re: Intercession City - Permit Nos. AC 49-203114, PSD-FL-180
Request to Burn Natural Gas in Units P7 through P11

Attached is one copy of the Proposed Permit Amendment, Intent to Issue and the Public Notice of Intent to Issue Permit Amendment (for publication by FPC) for peaking units P7 through P11 at the Intercession City Power Plant.

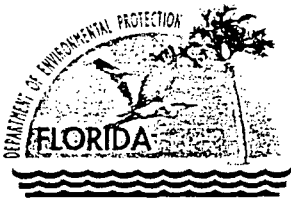
Please submit any comments you may have concerning the Department's proposed action to Mr. A. A. Linero, P.E., at the above address. If you have any questions, please call Ms. Teresa Heron or Mr. Linero at (904)488-1344.

Sincerely,

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

CHF/al/t

cc: M. Kennedy, FPC
C. Collins, CD
J. Harper, EPA
J. Bunyak, NPS



Department of Environmental Protection

DRAFT

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August XX, 1995

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director
Environmental Services Department H2G
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Pardue:

RE: Intercession City-DEP Permit No. AC 49-203114 and PSD-Fl-180
Request to Burn Natural Gas in Units P7 through P11

The Department is in receipt of your April 28, May 31, and July 7, 1995, letters requesting a permit modification to burn natural gas as a supplemental fuel in combustion turbines P7 through P11. The Bureau of Air Regulation has evaluated your request and approves the burning of natural gas for these turbines since there will not be an increase in either lb/hr/unit or tons/yr/unit of the permitted emission rates. Consequently, the following condition will be added:

SPECIFIC CONDITION No. 1

A new condition, No. 1A, will be added to this permit.

These emission units are allowed to burn natural gas. Emissions of each pollutant shall not exceed the following limits:

GE PG7111(EA), 4 units

	<u>lb/hr/unit</u>	<u>ton/hr/unit</u>
PM	7.50	12.71
SO ₂	2.99	5.06
CO	21.3	36.10
NO _x	107	181.37 and 25 ppmvd at 15% oxygen
VOC	3.0	5.08
H ₂ SO ₄	0.44	0.75

DRAFT

Mr. W. Jeffrey Pardue
August XX, 1995
Page Two

SIEMENS V84.3, 1 unit

	<u>lb/hr</u>	<u>ton/yr</u>
PM	7.5	12.71
SO2	4.22	7.15
CO	30.9	52.37
NOx	149	252.56 and 25 ppmvd at 15% oxygen
VOC	5.3	8.98
H2SO4	0.64	1.08

Allowable emissions are calculated at 59°F. Annual emissions rates are based on 3390 hours per year.

BACT Determination

The BACT determination is hereby revised to include the burning of natural gas at an emission standard of 25 ppmvd at 15%O₂.

It is the Department understanding that natural gas is available on an interruptible basis at this time. In the future, if natural gas become available on a non-interruptible basis, the Department may reassess the BACT and may require stricter NOx control over a reasonable period of time.

A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC49-203114, PSD-FL-180.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/th/t

enclosures

cc: Charles Collins, CD
Mike Kennedy, FPC

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT

PSD-FL-180A
AC49-203114

The Department of Environmental Protection gives notice of its intent to issue an amendment of permit PSD-FL-180 (AC49-203114) to Florida Power Corporation to allow the use of natural gas, an inherently less polluting fuel available on an interruptible basis as a supplemental fuel for electrical Peaking Units P7 through P11 located in Intercession City, Osceola County. When using natural gas, actual and allowable emissions of nitrogen oxides, sulfur dioxide, and particulate matter will be lower than actual and allowable emissions when burning fuel oil. These benefits are reflected in a revision to the previously-issued Best Available Control Technology (BACT) determination pursuant to Prevention of Significant Deterioration (PSD).

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 32399-2400, within 14 days of publication of this notice. 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 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/request 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 publication of this notice 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, Florida Administrative Code.

The application/request is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767

Any person may send written comments on the proposed action to Administrator, New Source Review Section, at the Department's Tallahassee address. All comments received within 14 days of the publication of this notice will be considered in the Department's final determination.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit Amendment

DEP File Nos. AC49-203114
PSD-FL-180A
Osceola County

Mr. W. Jeffrey Pardue, Director
Environmental Services Department H2G
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

INTENT TO ISSUE

The Department of Environmental Protection gives notice of its intent to issue a permit amendment for a (copy attached) to the applicant's facility as detailed in the application/request specified above and for the reasons stated below.

The applicant, Florida Power Corporation, Inc. applied on April 28, 1995, to the Department of Environmental Protection for an amendment of their current air construction permit previously issued pursuant to Prevention of Significant Deterioration (PSD permit). The request is to allow use of surplus natural gas, an inherently less polluting fuel available on an interruptible basis, as a supplemental fuel for peaking units P7 through P11. When using natural gas, actual and allowable emissions of nitrogen oxides, sulfur dioxide, and particulate matter will be lower than actual and allowable emissions when burning fuel oil. The facility is located in Intercession City, 6525 Osceola-Polk County Line Road, Osceola County Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a permit amendment is required for the proposed change.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit Amendment. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "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. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit amendment.

The Department will issue the permit amendment with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

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, 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 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. 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;

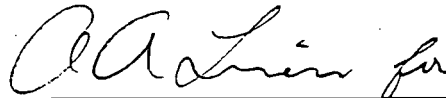
- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) 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 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 intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/request 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 intent 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.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

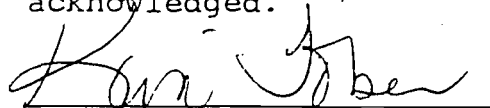
CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **INTENT TO ISSUE PERMIT AMENDMENT** all copies were mailed by certified mail before the close of business on 7-17-95 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

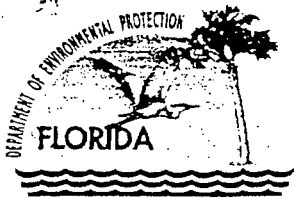
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk

7-17-95
Date

Copies furnished to:

M. Kennedy, FPC
C. Collins, CD
J. Harper, EPA
J. Bunyak, NPS



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

January 20, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. Michael Kennedy
Manager of Air Programs
Florida Power Corporation
Post Office Box 14042
St. Petersburg, Florida 33733

Dear Mr. Kennedy:

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

The Department has reviewed your January 5, 1995 request to amend the compliance testing requirements of the subject permit. Subsequent to a review of the compliance test results, the Department finds your request to be acceptable and the following will be changed and/or added:

A. Compliance Determination

Specific Condition No. 8 is amended as follows:

From

8. Compliance with the NO_x, SO₂, CO, PM, PM₁₀, and VOC standards shall be determined (on each unit while operating within 10% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July 1991 version) and adopted by reference in F.A.C. Rule 17-2.700.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3A. Gas Analysis
- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10. Determination of the Carbon Monoxide Emission from Stationary Sources

Mr. J. Michael Kennedy
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
January 20, 1995
Page 2 of 4

- Method 20. Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A. Determination of the Volatile Organic Compounds Emissions from Stationary Sources

To

8. Compliance with the NO_x, SO₂, CO, PM, PM₁₀, and VOC standards shall be determined (on each unit while operating within 10% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July, 1991 version) and adopted by reference in F.A.C. Chapter 62-297, and the ASTM method/procedure contained in 40 CFR 60.17.

- Method 1 Sample and Velocity Traverses
- Method 2 Volumetric Flow Rate
- Method 3A Gas Analysis
- Method 5 Determination of Particulate Matter Emissions from Stationary Sources
- Method 9 Determination of the Opacity of the Emissions from Stationary Sources
- ¹Method 8 Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10 Determination of the Carbon Monoxide Emission from Stationary Sources
- Method 20 Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- ²Method 25A Determination of the Volatile Organic Compounds Emissions from Stationary Sources

- 1 - No. 2 fuel oil analysis using ASTM D4294-90 may be used in lieu of EPA Reference Method 8 for the determination of H₂SO₄ mist, only if compliance with the permit limit for the sulfur content in the No. 2 fuel oil fired at the facility has been demonstrated.
- 2 - If compliance with the CO limits in this permit are demonstrated, testing for VOCs using EPA Reference Method 25A is not necessary.

B. Attachments to be Incorporated:

- FPC letter with enclosure received January 6, 1995.
- Mr. Garry Kuberski's FAX received January 11, 1995.
- Mr. Mike Kennedy's FAXs received January 11, 1995.

Mr. J. Michael Kennedy
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
January 20, 1995
Page 3 of 4

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 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

Mr. J. Michael Kennedy
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
January 20, 1995
Page 4 of 4

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 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/csl

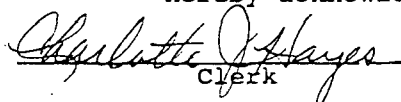
Attachments

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this PERMIT AMENDMENT and all copies were mailed by certified mail before the close of business on 1/24/95 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.


Clerk

1/24/95
Date



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

RECEIVED

SEP 28 1994

Environmental Svcs
Department

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:

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_x) emission limit of 57 ppm @ 15% O₂, 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_x Emission Limit

Your request to amend the construction permit by incorporating an ISO NO_x emission limit of 57 ppm @ 15% O₂ 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_x 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_x STD for the subject construction permit was established by the best available control technology (BACT) determination to be an allowable NO_x 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_x emission limit. Also, observed values of NO_x emissions

Mr. Kent Hedrick
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
September 21, 1994
Page 2 of 6

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_x emissions which exceed a STD. This STD is equal to the allowable NO_x 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_x emission allowance for fuel bound nitrogen (F) as defined in 40 CFR 60.332(a)(3). The applicant was given a NO_x 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_x 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_x 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.

Mr. Kent Hedrick
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
September 21, 1994
Page 3 of 6

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

Mr. Kent Hedrick
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
September 21, 1994
Page 4 of 6

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

Mr. Kent Hedrick
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
September 21, 1994
Page 5 of 6

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.

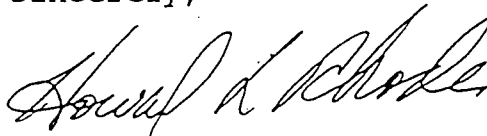
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this amendment. Persons whose substantial interests will be affected by any decision of the Department with regard 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

Mr. Kent Hedrick
AC 49-203114 [PSD-FL-180(A)]
Amendment Request
September 21, 1994
Page 6 of 6

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.


Clerk

9/23/94
Date

Attachment

Florida Power Corporation GE Frame 7EA Combustion Turbines

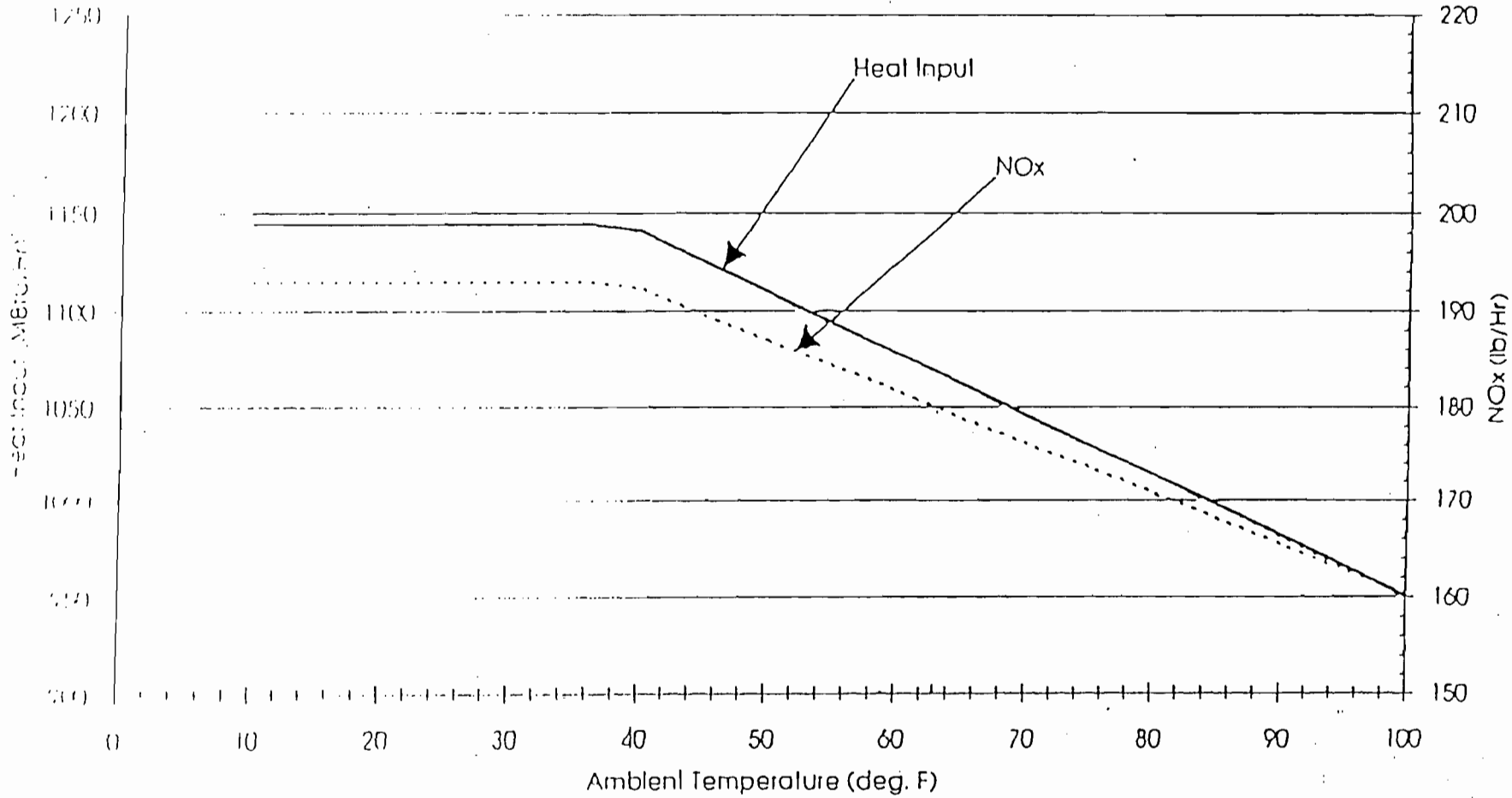


Figure 11
Florida Power Corporation
Intercession City Facility
Heat Input vs. Ambient Temperature Curve



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 15, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue
C.E.P. Manager
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

RE: Intercession City - DEP Permit No. AC49-203114
PSD-FL-180

Dear Mr. Pardue:

The Department is in receipt of your June 21, 1994, letter requesting the following:

- 1) The substitution of one (1) 117 MW Siemens V84.3 combustion turbine for two permitted 185.5 MW (each) GE Frame 7FA combustion turbines.
- 2) The extension of the expiration date to December 31, 1995.
- 3) The increase in hours of operation from 3390 to 4068 hours per year (this request was later dropped by Mr. Mike Kennedy of your staff via a telephone conversation with Ms. Teresa Heron).

The Bureau evaluated your request and approves the following:

- 1) The change in turbine's manufacturer and model.
- 2) The change in the expiration date of this permit:

FROM: December 31, 1994
TO: December 31, 1995

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. 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 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

Mr. Jeffrey Pardue
AC49-203114
July 14, 1994
Page 2 of 3

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, Florida Statutes.

The Petition shall contain the following information:

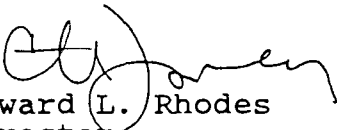
- (a) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) 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;
- (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 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.

Mr. Jeffrey Pardue
AC49-203114
July 14, 1994
Page 3 of 3

A copy of this letter shall be filed with the referenced permits and will become a part of those permits.

Sincerely,

for 
Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/TH/bjb

Attachment to be incorporated:

Mr. W. Jeffrey Pardue's letter of April 8, 1994

cc: Chuck Collins, CD

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 7/15/94 to the listed persons.

Clerk Stamp

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
Clerk

7/15/94
Date



Lawton Chiles
Governor

Florida Department of Environmental Protection

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

Virginia B. Wetherell
Secretary

December 14, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue
C.E.P. Manager
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733

Dear Mr. Pardue:

RE: Intercession City - DEP Permit No. AC 49-203114, PSD-FL-180

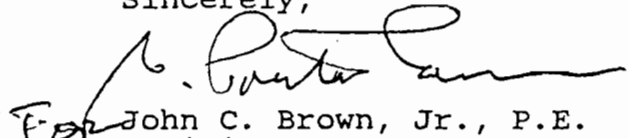
The Department is in receipt of your letter requesting an interpretation of Specific Condition No. 14 of the above mentioned permit. Specific Condition No. 14 reads: "The sources shall operate between 90% and 100% of permitted capacity during the compliance test(s) **as adjusted for ambient temperature.**" This request is made due to the fact that that DEP's Central District personnel has indicated that ambient temperature during compliance tests will not be considered.

The Bureau of Air Permitting and Standard agreed with your interpretation that the units will be considered to be in compliance with permitted maximum emission limits if peak load testing is performed while the units are operating between 90% and 100% of permitted capacity as determined by the ambient temperature occurring at the time of testing. Thus, Specific Condition No. 14 will remain as stated in the permit.

Mr. Jeffrey Pardue
December 14, 1993
Page Two

If you have any questions, please feel free to call Preston Lewis
at (904)488-1344 or write to me at the above address.

Sincerely,



For John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JB/TH/bjb

cc: Alexander Alexander, DEP Central District
Charles Collins, DEP Central District
Jewell Harper, EPA
John Bunyak, NPS
Mike Kennedy, FPC



Florida Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

November 15, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jeffrey Pardue
C.E.P., Manager
Florida Power Corporation
Post Office Box 14042
St. Petersburg, FL 33733

Dear Mr. Pardue:

RE: Florida Power Corporation
Amendment to Construction Permit
AC 49-203114 (PSD-FL-180)
Intercession Facility

The Department has determined that the above permit should be amended to specify No. 2 Fuel Oil, rather than a numerical value, as the control strategy for Fluorides, Mercury, Lead, Inorganic Arsenic and Beryllium. Because of the inherent nature of the combustion process, these constituents in the fuel oil will be emitted after firing. Consequently, specifying the type of fuel oil (i.e., No. 2 fuel oil) is sufficient to control the emissions of the various constituents. Specifying No. 2 fuel oil is recognized to be BACT for Mercury, Arsenic and Beryllium. Therefore, the following will be changed and/or added:

A. Specific Condition No. 1

FROM:

Table 1
Allowable Emission Limits
92.9 MW Simply Cycle Combustion Turbines

Pollutant	Standard Oil Firing	Each Unit lb/hr	Total T/yr	Bases
Fluorides	-	3.34×10^{-2}	0.23(b)	Application
Mercury (Hg)	3.0×10^{-6} lbs/MMBtu	3.09×10^{-3}	0.02(b)	Application
Lead (Pb)	8.9×10^{-6} lbs/MMBtu	9.16×10^{-3}	0.06(b)	Application
Inorganic Arsenic	4.2×10^{-6} lbs/MMBtu	4.32×10^{-3}	0.03(b)	BACT
Beryllium (Be)	2.5×10^{-6} lbs/MMBtu	2.57×10^{-3}	0.02(b)	BACT

Mr. Jeffrey Pardue
 AC 49-203114
 Permit Amendment
 November 15, 1993
 Page 2 of 5

TO:

Table 1-A
 Emission Control
 92.9 MW Simply Cycle Combustion Turbines

Pollutant	Method of Control	Basis
Fluorides	No. 2 Fuel Oil(a)	(b)
Mercury(Hg)	No. 2 Fuel Oil(a)	(b)
Lead(Pb)	No. 2 Fuel Oil(a)	(b)
Inorganic Arsenic	No. 2 Fuel Oil(a)	BACT
Beryllium(Be)	No. 2 Fuel Oil(a)	BACT

(a) The No. 2 Fuel Oil's sulfur content, by weight, shall not exceed a maximum sulfur content of 0.2%.

(b) Since this pollutant is an inherent constituent in distillate fuel oil, it will be regulated by specifying that only No. 2 Fuel Oil be fired at this facility.

and

FROM:

Table 2
 Allowable Emission Limits
 185.5 MW Simply Cycle Combustion Turbines

Pollutant	Standard Oil Firing	Each Unit lb/hr	Total 2 Units T/yr	Bases
Fluorides	-	6.13	0.20(b)	Application
Mercury (Hg)	3.0 x 10 ⁻⁶ lbs/MMBtu	5.66 x 10 ⁻³	0.02(b)	Application
Lead (Pb)	8.9 x 10 ⁻⁶ lbs/MMBtu	1.68 x 10 ⁻³	0.06(b)	Application
Inorganic Arsenic	4.2 x 10 ⁻⁶ lbs/MMBtu	7.9 x 10 ⁻³	0.02(b)	BACT
Beryllium (Be)	2.5 x 10 ⁻⁶ lbs/MMBtu	4.72 x 10 ⁻³	0.02(b)	BACT

Mr. Jeffrey Pardue
AC 49-203114
Permit Amendment
November 15, 1993
Page 3 of 5

TO:

Table 2-A
Emission Control
185.5 MW Simply Cycle Combustion Turbines

Pollutant	Method of Control	Basis
Fluorides	No. 2 Fuel Oil(a)	(b)
Mercury(Hg)	No. 2 Fuel Oil(a)	(b)
Lead(Pb)	No. 2 Fuel Oil(a)	(b)
Inorganic Arsenic	No. 2 Fuel Oil(a)	BACT
Beryllium(Be)	No. 2 Fuel Oil(a)	BACT

(a) The No. 2 Fuel Oil's sulfur content, by weight, shall not exceed a maximum sulfur content of 0.2%.

(b) Since this pollutant is an inherent constituent in distillate fuel oil, it will be regulated by specifying that only No. 2 Fuel Oil be fired at this facility.

B. Attachment to be Incorporated:

° Mr. Jeffrey Pardue's letter dated October 7, 1993.

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. 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 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, Florida Statutes.

Mr. Jeffrey Pardue
AC 49-203114
Permit Amendment
November 15, 1993
Page 4 of 5

The Petition shall contain the following information:

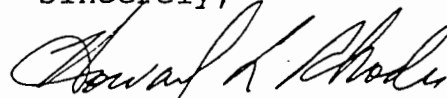
- (a) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) 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;
- (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 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.

Mr. Jeffrey Pardue
AC 49-203114
Permit Amendment
November 15, 1993
Page 5 of 5

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

Sincerely,



Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/TH/bjb

Attachment

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



Florida Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 6, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, C.E.P. Manager
Environmental Programs
Florida Power Corporation
P.O. Box No. 14042
St. Petersburg, FL 33733

Dear Mr. Pardue:

RE: Florida Power Corporation
Intercession City Facility
Request for Permit Modification
AC 49-203114, PSD-FL-180

The Department is in receipt of your letters dated July 26 and August 19, 1993, requesting modifications and amendments to the above mentioned permit. In reviewing the files for this facility, the Department has noted that most of the wording of the specific conditions of the Intercession City's permit were taken from a Florida Power Corporation's letter dated July 18, 1991, that was signed by Mr. W. W. Vierday. This above mentioned letter was written in a reply to the DeBary's proposed permit specific conditions that are identical to those in the Intercession City permit. The Department is willing to amend and to clarify the Intercession City's permit with your proposed wording. Based on the above, the Department has the following responses to your request:

SPECIFIC CONDITIONS NOS. 8 AND 9:

REQUEST:

Allow EPA test Method 19 instead of Method 2 for the determination of volumetric flow rate.

Delete Method 5 for the determination of particulate matter (PM) emissions.

Use Method 3A instead of Method 3 for gas analysis.

Mr. Jeffrey Pardue
October 6, 1993
Page 2

Delete Method 8 for determination of sulfuric acid mist and sulfur dioxide emissions.

RESPONSE:

EPA Method 19 instead of Method 2

The cause of the transient conditions that would prevent the use of EPA Method 2 is not clear. There are several physical changes that could be used to create a measurable steady-state flow condition. These physical changes include the installation of straightening vanes and the extension of the stack with the subsequent relocation of the sampling ports. For almost 20 years, the federal regulations have clearly stated that the optimum sampling location in a duct is usually located at least 8 diameters downstream and 2 diameters upstream of any entrance, exit, bend, or other disturbances. Based on the information presented, we could not evaluate your request. Please contact Ramesh Menon at (904) 488-1344 for further details on the information needed to evaluate this request.

EPA Method 5

These units must demonstrate compliance with the PM standard using either EPA Method 5 or EPA Method 17. Any deviation from the required EPA procedures will require the owner to request and obtain approval of an alternate sampling procedure pursuant to Rule 17-297.620 F.A.C. Specific Condition No. 9 will not be deleted.

EPA Method 8

Method 8 cannot be deleted since sulfuric acid mist emissions are subject to PSD regulations. However, for clarification, Specific Condition No. 8 will be amended as follows:

Compliance Determination

FROM:

8. Compliance with NO_x , SO_2 , CO, PM, PM_{10} , and VOC standards shall be determined (on each unit while operating within 10% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods and adopted by reference in F.A.C. Rule 17-2.700.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3. Gas Analysis

Mr. Jeffrey Pardue
October 6, 1993
Page 3

- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10. Determination of the Carbon Monoxide Emission from Stationary Sources
- Method 20. Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A. Determination of the Volatile Organic Compounds Emissions from Stationary Sources

Other DER approved methods may be used for compliance testing after prior Departmental approval.

TO:

8. Compliance with the allowable emission limits shall be determined within 60 days after achieving the maximum production rate at which this facility will be operated (on each unit while operating within 10% of the permitted maximum heat rate input) but not later than 180 days after initial start-up and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July, 1992 version) and adopted by reference in F.A.C. Rule 17-297.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3A. Gas Analysis
- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources
- Method 10. Determination of the Carbon Monoxide Emissions from Stationary Sources
- Method 20. Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A. Determination of the Volatile Organic Compounds Emissions from Stationary Sources

Other DEP approved methods may be used for compliance testing after prior Departmental approval.

Mr. Jeffrey Pardue
October 6, 1993
Page 4

SPECIFIC CONDITION NO. 13:

REQUEST:

Delete this condition which requires that the compliance test results for NO_x be adjusted to ISO conditions since the BACT determination did not specify this requirement.

RESPONSE:

NO_x emissions measured during compliance tests must be adjusted to ISO conditions. Traditionally, BACT determinations for gas turbines conducted by the Department follow the format of the new source performance standard (NSPS), Subpart GG. This NSPS lists the NO_x standard as ppmvd at 15% O₂. The standard has to be adjusted to ISO conditions (see NSPS preamble and Test Method Procedures).

You have indicated that the NO_x controls furnished with the GE units compensate for humidity and ambient temperatures such that further correction to ISO conditions is not necessary. However, Specific Condition No. 13 refers to adjustment of the compliance test data. The compliance test data is not processed through the combustion turbine controller. Therefore, the measured gas turbine's NO_x emission concentration levels must be adjusted to ISO conditions as specified in this permit condition.

SPECIFIC CONDITION NO. 15:

REQUEST:

Amend the third sentence in this condition that states: "The water to fuel ratio at which compliance is achieved shall be incorporated into the operation permit and shall be continuously monitored" to the following: "The water to fuel ratio shall be continuously monitored".

RESPONSE:

Federal regulations require the affected sources to be operated at a water-to-fuel ratio that is established during the initial performance test and this ratio is used as an indicator of compliance following the initial test. The ratio should be monitored in accordance with 40 CFR 60.334. This condition will not be changed.

Mr. Jeffrey Pardue
October 6, 1993
Page 5

SPECIFIC CONDITION NO. 6:

REQUEST:

Amend the wording of this condition that states: "Any change in the method of operation, equipment, or operating hours shall be submitted to the DEP's Bureau of Air Regulation".

RESPONSE:

This request is acceptable and this condition is changed to: Any proposed change in equipment, method of operation, or allowable hours of operation shall be submitted to the Department of Environmental Protection for review and approval.

SPECIFIC CONDITION NO. 10:

REQUEST:

Change the reference in the ASTM method for sulfur dioxide.

RESPONSE:

This reference will be changed as requested. This condition is amended to: Compliance with the SO₂ limit can also be determined by calculations based on fuel analysis by ASTM Method D4294 for the sulfur content of gaseous fuels.

SPECIFIC CONDITION NO. 23:

REQUEST:

Change the reference to steam injection in this condition.

RESPONSE:

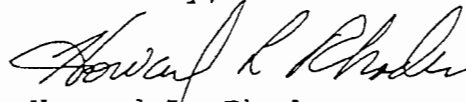
This reference will be changed as requested. This condition will be amended to: Literature on equipment selected shall be submitted to the Department of Environmental Protection as it becomes available. A CT-specific graph of the relationship between NO_x emissions and water injection and also another graph of ambient temperature and heat input to the CT shall be submitted to DEP's Central District office and the Bureau of Air Regulation.

Mr. Jeffrey Pardue
October 6, 1993
Page 6

FUEL-BOUND NITROGEN (FBN)

The Department has reviewed your requests for an increase of the BACT NO_x limits to allow for an additional 6 ppm based on the fuel bond nitrogen (FBN) allowance which is contained in 40 CFR 60, Subpart GG. This 6 ppm allowance will result in an increase of 264 tons/yr NO_x (44 ton/yr/unit) and will require a revision of the NO_x-BACT. The new revision would require an updated economic and air quality analysis. A similar concern on the DeBary facility has been expressed since so much water is being injected to obtain the 42 ppm NO_x level. However, before changing the NO_x emission level on either this facility or DeBary the Department would like to discuss the feasibility and economics of a lower FBN with the fuel manufacturer.

Sincerely,



Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/TH/bjb

cc: Alex Alexander, DEP Central District
J. Harper, EPA
J. Bunyak, NPS
Mike Kennedy, FPC

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Units
P. O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2053 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061(16) OF CHAPTER 403, FLORIDA STATUTES, AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:

Unit #1 oil fired gas turbine electric generating units
utilizing #2 distillate oil at 588×10^6 BTU/hr./unit

LOCATED AT: East of Intercession City, 3.5 miles on SR532 &
17-92, Osceola County UTM 7446388 E., 3126000 N.

IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

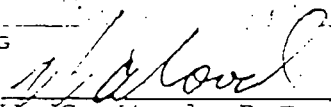
THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____

AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR

FORM 1-J


W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Units
P. O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2054 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061(16) OF CHAPTER 403, FLORIDA STATUTES, AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:
Unit #2 oil fired gas turbine electric generating units
utilizing #2 distillate oil at 588×10^6 BTU/hr./unit

LOCATED AT: East of Intercession City, 3.5 miles on SR532 & 19-72
Osceola County UTM 7446388 E., 3126000 N.

IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

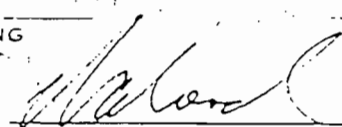
THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____

AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR

FORM 1-J



W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Unit
P. O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2055 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061(16) OF CHAPTER 403, FLORIDA STATUTES AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:

Unit #3 oil fired gas turbine electric generating units utilizing
#2 distillate oil at 588×10^6 BTU/hr./unit

LOCATED AT: East of Intercession City, 3.5 miles on SR532 & 17-92
Osceola County UTM 7446388 E., 3126000 N.

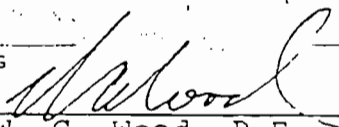
IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN,
ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS
PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____
AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND
REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR


W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Units
P. O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2056 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061(16) OF CHAPTER 403, FLORIDA STATUTES, AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:
Unit #4 oil fired gas turbine electric generating units utilizing
#2 distillate oil at 588×10^6 BTU/hr./unit

LOCATED AT: East of Intercession City, 3.5 miles on SR532 & 17-92
Osceola County UTM 7446388 E., 3126000 N.

IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973


AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____ AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR

FORM 1-J


W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Units
P.O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2057 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061 (16) OF CHAPTER 403, FLORIDA STATUTES, AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:
Unit #5 oil fired gas turbine electric generating units utilizing
#2 distillate oil at 588X10⁶ BTU/hr./unit

LOCATED AT East of Intercession City, 3.5 miles on SR532 & 17-92
Osceola County UTM 7446388 E., 3126000 N.

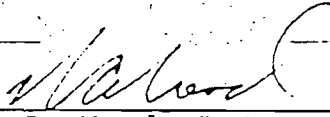
IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____ AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR


W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

CONSTRUCTION PERMIT

FOR Florida Power Corporation
Intercession City Peaking Units
P. O. Box 14042, St. Petersburg, Florida 33733

PERMIT NO. AC49-2058 DATE December 20, 1973

PURSUANT TO THE PROVISION OF SECTION 403.061(16) OF CHAPTER 403, FLORIDA STATUTES AND CHAPTER 17-4, FLORIDA ADMINISTRATIVE CODE, THIS PERMIT IS ISSUED TO:
Mr. J. T. Rodgers, Assistant Vice President

FOR THE CONSTRUCTION OF:
Unit #6 oil fired gas turbine electric generating units utilizing
#2 distillate oil at 588×10^6 BTU/hr./unit

LOCATED AT: East of Intercession City 3.5 miles on SR532 & 17-92
Osceola County UTM 7446388 E., 3126000 N.


IN ACCORDANCE WITH THE APPLICATION DATED July 3, 1973

AND IN CONFORMITY WITH THE STATEMENTS AND SUPPORTING DATA ENTERED THEREIN, ALL OF WHICH ARE FILED WITH THE DEPARTMENT AND ARE CONSIDERED A PART OF THIS PERMIT.

THIS PERMIT SHALL BE EFFECTIVE FROM THE DATE OF ITS ISSUANCE UNTIL _____ AND SHALL BE SUBJECT TO ALL APPLICABLE LAWS OF THE STATE AND THE RULES AND REGULATIONS OF THE DEPARTMENT.

CHIEF, BUREAU OF PERMITTING

EXECUTIVE DIRECTOR


W. C. Wood, P.E.
Regional Engineer

STATE OF FLORIDADEPARTMENT OF POLLUTION CONTROLCONSTRUCTION PERMIT PROVISOSAIR POLLUTION SOURCES

Permit No. AC49-2053-2058

Date: 11-2-73

- [X] 1. Construction of this installation shall be completed by April 30, 1974
- [X] 2. This construction permit expires on October 1, 1974 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Pollution Control Board.
- [X] 3. All applicable rules of the Department including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction.
- [X] 4. The applicant shall continue the retention of the engineer of record for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. A report of such inspection shall be submitted by the engineer to the Department of Pollution Control for consideration toward the issuance of an operation permit.
- [x] 5. This turbines shall be tested for particulates, SO_x and NO_x within 60 days after it is placed in operation. These test results are required prior to our issuance of an operation permit and shall be submitted in duplicate to the DPC Central Florida Regional Office 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803
- [x] 6. The operation of this installation shall be observed for visible emissions in accordance with Method 9 - Visible Determination of the Opacity of Emissions from Stationary Sources (Federal Register, December 23, 1971). The observation results are required prior to our issuance of an operation permit, and shall be submitted in duplicate to the DPC Central Florida Regional Office,
- [] 7. Stack sampling for total particulate or other contaminant emissions shall be conducted if found by the DPC Central Florida Regional Office to be necessary as a basis for the issuance of an operation permit.
- [x] 8. Satisfactory ladders, platforms, and other safety devices shall be provided/available as well as necessary ports to facilitate the carrying out of an adequate sampling program.

9. The following items are required prior to our issuance of an operation permit in addition to the engineer of record's report of inspection:

- (a) An emission report for total particulates and sulfur oxides based upon actual operations.
- (b) A tabular summary of actual records of frequencies and durations of soot blowing as well as boiler blowdown characteristics and disposal practices.

These items are required prior to our issuance of an operation permit and shall be submitted in duplicate to the DPC _____
Florida Regional Office, _____

- 10. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.
- 11. All fugitive dust generated at this site shall be adequately controlled.

Final Determination

Florida Power Corporation
Intercession City
AC 49-203114
PSD-FL-180A

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

August 10, 1995

Final Determination
Florida Power Corporation
Intercession City Facility
PSD-FL-180A
AC49-203114

The Permit Amendment for the Florida Power Corporation (FPC) Intercession City facility was distributed on July 17, 1995. The amendment will allow the use of natural gas as a supplemental fuel for electrical peaking units P7 through P11. When using natural gas, actual and allowable emissions will be lower than when burning fuel oil. This permit amendment does not change the intent of the previously issued PSD permit nor does it result in an emissions increase.

The Notice of Intent to Issue was published in the Orlando Sentinel on July 21, 1995. Copies of the permit amendment evaluation were available for inspection at the Department of Environmental Protection's offices in Orlando and Tallahassee.

No comments were submitted during the public notice period.

The final action of the Department is to issue the permit amendment as noted during the public notice period.

Final Determination

Florida Power Corporation
Intercession City Facility
Intercession City, Osceola County, Florida

Six Simple Cycle Combustion Turbines
(Four 92.9 MW & Two 185.5 MW)

Permit Number: AC 49-203114
PSD-FL-180

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

August 17, 1992

FINAL DETERMINATION

The Technical Evaluation and Preliminary Determination for the permit to construct six simple cycle combustion peaking units at Florida Power Corporation's (FPC) Intercession City Electric Generating Station in Intercession City, Osceola County, Florida, was distributed on May 22, 1992. The Notice of Intent to Issue was published in the Orlando Sentinel on June 17, 1992. Copies of the evaluation were available for public inspection at the Department's offices in Orlando and Tallahassee.

FPC's applications for permits to construct six simple cycle combustion peaking units (with a combined capacity of 371 MW) at their Intercession City Electric Generating Station have been reviewed by the Bureau of Air Regulation in Tallahassee.

No adverse comments were submitted by the U.S. Environmental Protection Agency (EPA) in their letter dated June 16, 1992.

Comments were received from Mr. Scott H. Osbourn, Senior Environmental Engineer for FPC, and Mr. John R. Eadie, Acting Regional Director of the U. S. Fish and Wildlife Service.

The Bureau has considered Mr. Osbourn's and Mr. Eadie's comments and has addressed them as follows:

Florida Power Corporation's letter dated July 16, 1992.

COMMENT:

Mr. Osbourn's concerns are regarding the economics (cost differentials per gallon for various grades) of using No. 2 fuel oil with a maximum of 0.2% sulfur by weight vs No. 2 fuel oil with a 0.3% sulfur average and a maximum of 0.5% sulfur on an annual basis. Initially, Mr. Osbourn requested that Specific Condition No. 5 be deleted, the expiration date of the permit changed, and Specific Condition No. 16 be modified. However, on July 24, 1992, Mr. Osbourn withdrew his requests for changes to Specific Conditions Nos. 5 and 16, via a telephone conversation with Mr. Preston Lewis, Permitting Supervisor.

RESPONSE:

The Department has evaluated Mr. Osbourn's comments and concluded that the BACT determination for this project is justifiable and should not be changed. The limitations for sulfur content and SO₂ emissions will remain as specified in the permit: Distillate fuel oil with a maximum of 0.2% sulfur by weight and 2459 TPY SO₂. However, as requested, the economics (cost differentials per gallon for various grades) of this project will be revisited before startup, and if warranted, the BACT determination and permit conditions will be revised.

Final Determination
AC 49-203114 (PSD-FL-180)
Page 2 of 3

As requested, the expiration date of this permit will be changed to December 31, 1994.

U.S. Fish and Wildlife Service's letter dated July 16, 1992.

COMMENTS:

Mr. Eadie's comments are regarding the sulfur content in the oil and the air quality analyses. He recommended to lower the sulfur content of the No. 2 fuel oil to 0.05% S (by weight) maximum.

RESPONSE:

Mr. Eadie's concerns regarding the sulfur content in the oil are valid. We also believe that new sources should minimize SO₂ emissions when feasible. It is true that recent permit applications (Kissimmee Utilities Authority, Auburndale Power Partners, and Central Florida Power) have proposed to fire oil with a maximum sulfur content of 0.05%, but it should be pointed out that they are using fuel oil as a supplementary fuel. However, in this case, it is not economically feasible to require fuel oil with a 0.05 % maximum sulfur content since fuel oil is the primary and only fuel at the site. Section 211(i)(1) of the Clean Air Act, Sulfur Content Requirements For Diesel Fuel, states: "Effective October 1, 1993, no person shall manufacture, sell, supply, offer for sale or supply, dispense, transport, or introduce into commerce motor vehicle diesel fuel which contains a concentration of sulfur in excess of 0.05% (by weight) or which fails to meet a cetane index minimum of 40..". Although this regulation is not applicable to stationary sources, and we will continue evaluating sources in a BACT case-by-case basis, it will have an impact on the availability and economics of requiring fuel oil with a lower sulfur content for future projects.

COMMENT:

Mr. Eadie's comments on the potential impacts to the Chassahowitzka Wilderness Area.

RESPONSE:

When the Department released its Intent to Issue this permit, we believed the applicant had sufficiently addressed all of the potential impacts to the air quality related values (AQRVs) (such as vegetation, soils, terrestrial wildlife and visibility) in the Chassahowitzka Wilderness Area. The Fish and Wildlife Service (FWS) identified potential effects on fresh water creeks and

Final Determination
AC 49-203114 (PSD-FL-180)
Page 3 of 3

related wildlife in the wilderness area as an AQVR after the Intent wsa released. However, the Department agrees with the FWS that, based on modeling results, we do not anticipate that these resources will be adversely affected by emissions from the proposed project. In addition, the Department will require future applicants to address impacts to these aquatic resources.

The final action of the Department will be to issue construction permit, No. AC 49-203114 (PSD-FL-180), as proposed in the Technical Evaluation and Preliminary Determination, with the above changes incorporated.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 49-203114
PSD-FL-181
Osceola County

180

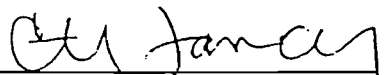
Mr. R. W. Neiser
Florida Power Corporation
3201-34th Street North
St. Petersburg, FL 33733

Enclosed is Permit Number AC 49-203114 to construct six simple cycle combustion turbines at Florida Power Corporation's Intercession City Electric Generating Station in Osceola County, Florida. This permit is issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, 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 Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on August 17, 1992 to the listed persons.

Clerk Stamp

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. Harper
(Clerk)

8/17/92
(Date) -

Copies furnished to:

- Kennard Kosky, P.E.
- Charles Collins, Central District
- Jewell Harper, EPA
- Chris Shaver, NPS



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Florida Power Corporation
Intercession City Facility
3201 34th Street South
St. Petersburg, Florida 33733

Permit Number: AC 49-203114
PSD-FL-180

Expiration Date: Dec. 31, 1994

County: Osceola

Latitude/Longitude: 28°15'37"N
81°32'47.6"W

Project: Four 92.9 MW and Two
185.5 MW Simple Cycle Gas
Turbines

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For four 92.9 MW and two 185.5 MW simple cycle combustion turbines (CTs) with maximum heat input of 1,029 MMBtu/hr/unit and 1,886.3 MMBtu/hr/unit, respectively, at 59°F (oil) to be located at the Intercession facility in Intercession City, Florida. The turbines are to be GE PG7111FA and GE PG7111EA equipped with wet injection. The UTM coordinates are Zone 17, 446.3 km East and 3126 km North.

The sources shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Florida Power Corporation (FPC) application received October 3, 1992.
2. Department's letter dated October 31, 1991.
3. FPC's letter received December 16, 1991.
4. FPC's letter received January 23, 1992.
5. FPC's letter received February 10, 1992.
6. Department's letter dated February 21, 1992.
7. FPC's letter dated March 5, 1992.
8. Department's letter dated March 9, 1992.
9. FPC's letter dated March 25, 1992.

PERMITTEE:
Florida Power Corporation
Intercession City Facility

Permit Number: AC 49-203114
PSD-FL-180
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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 of 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.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.
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.
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.

PERMITTEE:
Florida Power Corporation
Intercession City Facility

Permit Number: AC 49-203114
PSD-FL-180
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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 any 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.

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.

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 extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:
Florida Power Corporation
Intercession City Facility

Permit Number: AC 49-203114
PSD-FL-180
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

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

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

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 for 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:
 - the date, exact place, and time of sampling or measurements;

PERMITTEE:
Florida Power Corporation
Intercession City Facility

Permit Number: AC 49-203114
PSD-FL-180
Expiration Date: December 31, 1994

GENERAL CONDITIONS:

- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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.

SPECIFIC CONDITIONS:

Emission Limits

1. The maximum allowable emissions from these sources shall not exceed the emission rates listed in Table 1 (92.9 MW combustion turbines) and Table 2 (185.5 MW combustion turbines).

2. Visible emissions shall not exceed 20% opacity except at full load in which case visible emissions shall not exceed 10% opacity.

Operating Rates

3. These sources are allowed to use only No. 2 fuel oil with a 0.2% sulfur content maximum, by weight.

4. The permitted materials and utilization rates for the simple cycle gas turbines shall not exceed:

(A) The average maximum capacity factor shall be limited to 38.7% (3,390 hours per year operating time).

(B) Total hours of operation for the six turbines shall not exceed 20,340 unit hours per year. Unit hour per year shall be determined by adding the hrs/yr operation of each of the six units.

(C) GE FRAME 7FA

a) The maximum heat input of 2,032 MMBtu/hr/unit at 20°F (peak load).

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- b) The maximum heat input of 1,886 MMBtu/hr/unit at 59°F (peak load).
- c) The maximum heat input of 1,708 MMBtu/hr/unit at 90°F (peak load).
- d) Maximum No. 2 fuel oil consumption shall not exceed 14,342 gal/hr/unit (at 59°F) or 97,238,760 gal/yr based on 59°F or the prorated consumption based on the tables in the application to construct these units.

(D) GE FRAME 7EA

- 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).
- d) Maximum No. 2 fuel oil consumption shall not exceed 7,826 gal/hr/unit or 106,120,560 gal/yr based on 59°F or the prorated consumption based on the tables in the application to construct these units.

5. The capacity factor for these turbines shall be limited to 33% based on a weighted 12 month rolling maximum sulfur content of 0.2%. However, if the weighted rolling average sulfur content of the fuel oil is less than 0.2%, the capacity factor may be adjusted using the following table:

<u>Percent</u> <u>Average Sulfur Content</u>	<u>% Capacity Factor</u>
0.2 - 0.195	33.0
0.19 - 0.185	34.4
0.18 - 0.175	35.8
0.17 - 0.165	37.2
0.16 - or less	38.7

6. Any change in the method of operation, equipment or operating hours shall be submitted to DER's Bureau of Air Regulation.

7. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility may be included in the operating permit.

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Compliance Determination

8. Compliance with the NO_x, SO₂, CO, PM, PM₁₀, and VOC standards shall be determined (on each unit while operating within 10% of the permitted maximum heat rate input) within 180 days of initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July, 1991 version) and adopted by reference in F.A.C. Rule 17-2.700.

- Method 1. Sample and Velocity Traverses
- Method 2. Volumetric Flow Rate
- Method 3. Gas Analysis
- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity of the Emissions from Stationary Sources
- Method 8. Determination of the Sulfuric Acid of the Emissions from Stationary Sources
- Method 10. Determination of the Carbon Monoxide Emission from Stationary Sources
- Method 20. Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A. Determination of the Volatile Organic Compounds Emissions from Stationary Sources

Other DER approved methods may be used for compliance testing after prior Departmental approval.

9. Method 5 must be performed on one combustion turbine (each type) to determine the initial compliance status of the unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded at peak load.

10. Compliance with the SO₂ emission limit can also be determined by calculations based on fuel analysis using ASTM D4292 for the sulfur content of liquid fuels.

11. Trace elements of Beryllium (Be) shall be tested during initial compliance test using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.

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12. Mercury (Hg) shall be tested during initial compliance test using EPA Method 101 (40 CFR 61, Appendix B) or fuel sampling analysis using methods acceptable to the Department.

13. During performance tests, to determine compliance with the proposed NO_x standard, measured NO_x emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_x \text{ obs}) \frac{(P_{\text{ref}})^{0.5}}{P_{\text{obs}}} e^{19 (H_{\text{obs}} - 0.00633)} \frac{(288^\circ\text{K})}{T_{\text{AMB}}} 1.53$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

H_{obs} = Specific humidity of ambient air at test.

e = Transcendental constant (2.718).

T_{AMB} = Temperature of ambient air at test.

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

15. A continuous monitoring system shall be installed to monitor and record the fuel consumption on each unit. Water injection shall be utilized for NO_x control. The water to fuel ratio at which compliance is achieved shall be incorporated into the operation permit and shall be continuously monitored. The system shall meet the requirements of 40 CFR Part 60, Subpart GG.

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16. Sulfur, nitrogen content and lower heating value of the fuel being fired in the combustion turbines shall be based on a weighted 12 month rolling average from fuel delivery receipts. The records of fuel oil usage shall be kept by the company for a two-year period for regulatory agency inspection purposes. For sulfur dioxide, periods of excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.2 percent.

Rule Requirements

17. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, Chapters 17-2 and 17-4, Florida Administrative Code and 40 CFR (July, 1990 version).

18. The sources shall comply with all requirements of 40 CFR 60, Subpart GG, and F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines.

19. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

20. The sources shall comply with F.A.C. Rule 17-2.700, Stationary Point Source Emission Test Procedures.

21. If construction does not commence within 18 months of issuance of this permit, then the permittee shall obtain from DER a review and, if necessary, a modification of the control technology and allowable emissions for the unit(s) on which construction has not commenced (40 CFR 52.21(r)(2)).

22. Quarterly excess emission reports, in accordance with the July 1, 1991 version of 40 CFR 60.7 and 60.334 shall be submitted to DER's Central District office.

23. Literature on equipment selected shall be submitted as it becomes available. A CT-specific graph of the relationship between NOx emissions and steam injection and also another of ambient temperature and heat inputs to the CT shall be submitted to DER's Central District office and the Bureau of Air Regulation.

24. Stack sampling facilities shall be provided for each of the stacks.

25. Construction period fugitive dust emissions shall be minimized by covering or watering dust generation areas.

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SPECIFIC CONDITIONS:

26. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur and nitrogen contents and the lower heating value of the fuel being fired; fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office by March 1 of each calendar year.

27. 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 (F.A.C. Rule 17-4.090).

28. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 17th day
of August, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



Carol M. Browner
Secretary

TABLE 1
ALLOWABLE EMISSION LIMITS
92.9 MW Simple Cycle GE Frame EA Combustion Turbine

Pollutant	Standard Oil Firing	Each Unit lb/hr ^(a)	Total 4 Units T/yr	Basis
NO _x	42 ppmv at 15% oxygen-dry basis	182	1232 ^(a)	BACT
SO ₂	No. 2 fuel oil with 0.2% max. sulfur	222	1283 ^(c)	BACT
PM/PM ₁₀	0.01 lb/MMBtu	15	102 ^(b)	BACT
VOC	-	5	34 ^(b)	BACT
CO	25 ppm	54	366 ^(b)	BACT
Sulfuric Acid Mist	No. 2 fuel oil with 0.2% max. sulfur	18	106 ^(c)	BACT
Fluorines (FR)	-	3.34×10^{-2}	0.23 ^(b)	Application
Mercury (Hg)	3.0×10^{-6} lbs/MMBtu	3.09×10^{-3}	0.02 ^(b)	Application
Lead (Pb)	8.9×10^{-6} lbs/MMBtu	9.16×10^{-3}	0.06 ^(b)	Application
Inorganic Arsenic	4.2×10^{-6} lbs/MMBtu	4.32×10^{-3}	0.03 ^(b)	BACT
Beryllium (Be)	2.5×10^{-6} lbs/MMBtu	2.57×10^{-3}	0.02 ^(b)	BACT

(a) Emission rates based on 59°F and 15% O₂ at peak load.

(b) Equivalent to 3,390 hours per year at peak load (38.7% capacity factor) and 59°F.

(c) Total TPY for SO₂ assumes 33% capacity factor and fuel with a maximum sulfur content of 0.2%. Refer to Specific Condition No. 5 for listed capacity factors vs. sulfur content in oil.

TABLE 2
ALLOWABLE EMISSION LIMITS
185.5 MW Simple Cycle GE Frame FA Combustion Turbine

Pollutant	Standard Oil Firing	Each Unit lb/hr ^(a)	Total 2 Units T/yr	Basis
NO _x	42 ppmv at 15% oxygen-dry basis	334	1132 ^(a)	BACT
SO ₂	No. 2 fuel oil with 0.2% max. sulfur	407	1176 ^(c)	BACT
PM/PM ₁₀	0.01 lb/MMBtu	17	58 ^(b)	BACT
VOC	-	9	31 ^(b)	BACT
CO	25 ppm	79	268 ^(b)	BACT
Sulfuric Acid Mist	No. 2 fuel oil with 0.2% max. sulfur	28	81 ^(c)	BACT
Fluorines (FR)	-	6.13×10^{-2}	0.20 ^(b)	Application
Mercury (Hg)	3.0×10^{-6} lbs/MMBtu	5.66×10^{-3}	0.02 ^(b)	Application
Lead (Pb)	8.9×10^{-6} lbs/MMBtu	1.68×10^{-2}	0.06 ^(b)	Application
Inorganic Arsenic	4.20×10^{-6} lbs/MMBtu	7.9×10^{-3}	0.02 ^(b)	BACT
Beryllium (Be)	2.5×10^{-6} lbs/MMBtu	4.72×10^{-3}	0.02 ^(b)	BACT

(a) Emission rates based on 59°F and 15% O₂ at peak load.

(b) Equivalent to 3,390 hours per year at peak load (38.7% capacity factor) and 59°F.

(c) Total TPY for SO₂ assumes 33% capacity factor and fuel with a maximum sulfur content of 0.2%. Refer to Specific Condition No. 5 for listed capacity factors vs. sulfur content in oil.

Best Available Control Technology (BACT) Determination
 Florida Power Corporation
 Intercession City Facility
 Osceola County

The applicant proposes to operate six No. 2 fuel oil fired simple cycle combustion turbines with an output power of 92.9 MW (4 turbines) and 185.5 MW (2 turbines) to be used for peaking power at their facility in Osceola County, Florida.

The applicant states that the maximum heat input will be 1,029 MMBtu/hr and 1,886 MMBtu/hr for each turbine type (Frame EA and Frame FA, respectively). The applicant has indicated the maximum annual tonnage of regulated pollutants based on sea level conditions at 59°F and 38.7% capacity (3,390 hours/year) to be as follows:

Pollutant	Potential Emissions (tons/yr)	PSD Significant Emission Rate (tons/yr)
NO _x	2369	40
SO ₂	4326	40
H ₂ SO ₄ Mist	626	7
PM	159	25
PM ₁₀	159	15
CO	633	100
VOC	65	40
Be	0.034	0.0004
Hg	0.04	0.1
Pb	0.12	0.6
As	0.054	0

Florida Administrative Code Rule 17-2.500(2)(f)(3) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application

October 3, 1991

BACT Determination Requested by the Applicant

<u>Pollutant</u>	<u>Determination</u>
NO _x	42 ppmvd @ 15% O ₂
SO ₂ and H ₂ SO ₄	Max 0.5% Sulfur No. 2 fuel oil
PM/PM ₁₀	Combustion Controls
CO	Combustion Controls
VOC	Combustion Controls
As, Be	Fuel Quality

BACT Determination Procedure

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the 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:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology 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).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) 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 source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source 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 Pollutants Analysis

Nitrogen Oxides (NO_x)

The applicant has stated that BACT for nitrogen oxides will be met by using wet injection necessary to limit emissions to 42 ppmvd corrected to 15% oxygen for No. 2 fuel oil firing.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NO_x emission limit established to date for a combustion turbine is 4.5 ppmvd at 15% percent oxygen. This level of control was accomplished through the use of water injection and a selective catalytic reduction (SCR) system.

Selective catalytic reduction is a post-combustion method for

control of NO_x emissions. The SCR process combines vaporized ammonia with NO_x in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage through the catalyst bed. The SCR process can achieve up to 90% reduction of NO_x with a new catalyst. As the catalyst ages, the maximum NO_x reduction will decrease to approximately 86 percent.

The effect of exhaust gas temperature on NO_x reduction depends on the specific catalyst formulation and reactor design. Generally, SCR units can be designed to achieve effective NO_x control over a 100-300°F operating window within the bounds of 450-800°F, although recently developed zeolite-based catalysts are claimed to be capable of operating at temperatures as high as 950°.

Most commercial SCR systems operate over a temperature range of about 600-750°F. At levels above and below this window, the specific catalyst formulation will not be effective and NO_x reduction will decrease. Operating at high temperatures can permanently damage the catalyst through sintering of surfaces.

Increased water vapor content in the exhaust gas (as would result from water or steam injection in the gas turbine combustor) can shift the operating temperature window of the SCR reactor to slightly higher levels.

The exhaust temperatures of the proposed CTs for the Intercession City site are expected to be in excess of 1,000°F. At temperatures of 1,000°F and above, the zeolite catalyst (reported to operate within -600°F to 950°F) will be irreparably damaged. Therefore, application of an SCR system using a zeolite catalyst on a simple-cycle operation is technically infeasible without exhaust gas cooling. Attemperation systems are neither commercially available nor have they been applied, even at a pilot stage, to SCR systems associated with simple-cycle CTs.

Consequently, the applicant has rejected using SCR because of technical infeasibility, economic and environmental impact. In addition, controlling NO_x emissions with SCR, the applicant has identified the following limitations: (a) reduced power output, (b) ammonia slip, and (c) disposal of hazardous waste generated (spent catalyst). The applicant was unable to find similar combustion turbines firing fuel oil and equipped with SCR, and states several supporting reasons for their decision in Table 4-3 of the application.

Economic analysis review of an application for a similar combustion turbine, included levelized cost for SCR of \$2,190,000. Assuming that the lowered ammonia injection ratio strategy was used to control NO_x emissions by 65%, the SCR would control 201 tons (.65 x 308 tons/year) for the 92.9 MW turbine and 367 tons (.65 x 566 tons/year). This reduction (201 and 367 tons/year) assumes an operating rate of 3,390 hours/year/unit. When this

reduction of NO_x is taken into consideration with the total annual cost of \$2,190,000, the cost per ton of controlling NO_x is \$10,890 and \$5,967 for the 92.9 MW and 185.5 MW units, respectively.

Several BACT determinations have established a 25% capacity factor as an operating limit due to the increase in nitrogen oxides emissions that results from the burning of oil as compared to natural gas. In some cases, turbines (using natural gas as a primary fuel) have been allowed to operate above the 25% capacity factor limitation on oil (generally 33%) provided that they use low NO_x combustors (42 ppmv on oil firing). Since the Intercession City facility is capable of limiting NO_x emissions to 42ppmv using wet injection and can only use oil, it is reasonable to allow the capacity factor to range from 33 to 38.7%. Hence, the technology proposed, wet injection, with a maximum capacity factor of 38.7% is accepted by the Department as BACT for NO_x .

Sulfur Dioxide(SO_2) and Sulfuric Acid Mist (H_2SO_4)

The applicant has stated that sulfur dioxide (SO_2) and sulfuric acid mist (H_2SO_4) emissions when firing fuel oil will be controlled by lowering the operating time to 3390 hour/year per unit and the fuel oil sulfur content to a maximum of 0.5 % by weight, and an average of 0.3%. This will result in an annual emission rate of 4,326 tons SO_2 /year and 626 tons H_2SO_4 mist per year.

In accordance with the "top down" BACT review approach, only two alternatives exist that would result in more stringent SO_2 emissions. These include the use of a lower sulfur content fuel oil or the use of wet lime or limestone-based scrubbers, otherwise known as flue gas desulfurization (FGD).

In developing the NSPS for stationary gas turbines, EPA recognized that FGD technology was inappropriate to apply to these combustion units. EPA acknowledged in the preamble of the proposed NSPS that "Due to the high volumes of exhaust gases, the cost of flue gas desulfurization (FGD) to control SO_2 emissions from stationary gas turbines is considered unreasonable."(23). EPA reinforced this point when, later on in the preamble, they stated that "FGD... would cost about two to three times as much as the gas turbine."(23). The economic impact of applying FGD today would be no different.

Furthermore, the application of FGD would have negative environmental and energy impacts. Sludge would be generated that would have to be disposed of properly, and there would be increased utility (electricity and water) costs associated with the operation of a FGD system. The capital cost alone of a system designed for 90% removal would require debt services cost of \$30,000+/tons SO_2 removed. Finally, there is no information in the open literature to indicate that FGD has ever been applied to stationary gas turbines burning distillate oil.

The elimination of flue gas controls as a BACT option then leaves the use of low sulfur fuel oils as the next option to be investigated. Area available distillate fuel oil has a sulfur content in the range of 0.1% - 0.5% by weight. As already mentioned, several BACT determinations nationwide have established a 25% capacity factor as an operating time limit for turbines using gas as a primary fuel and oil as a supplemental fuel. Those facilities that have been permitted to operate above the 25% capacity factor limitation had a maximum sulfur content ranging from 0.20 to 0.25 percent.

The Intercession City facility's proposed simple cycle turbines will be allowed to operate from 33 to 37.8% capacity factor provided that the maximum sulfur content will not exceed 0.2%. This would result in a SO₂ and H₂SO₄ mist reduction of 1867 tons/year [4326 (proposed) - 2459 (allowable)] and 439 tons/yr [626 (proposed) - 187 (allowable)] while operating at a 33% capacity factor.

The applicant's cost analysis presented showed that the cost effectiveness of using 0.2% sulfur maximum in the oil instead of 0.5% sulfur maximum is \$1,995/ton SO₂ removed. The Department believes that this cost of \$1,995/ton removed is reasonable as BACT for this proposed project.

Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Combustion design is proposed as BACT as a result of the technical infeasibility and economic impact of using catalytic oxidation on fuel-oil-fired CTs. Catalytic oxidation has not been demonstrated on a continuous basis when using fuel oil and a cost effectiveness of \$7,099/ton removed will have an economic impact on this facility. The Department is in agreement with the applicant's proposal, therefore, BACT for this facility's gas turbines is combustion design as proposed.

Particulate Matter (PM/PM₁₀)

The design of the CTs ensures that particulate emissions will be minimized by combustion control and the use of clean fuels. The maximum particulate emissions from the CTs when burning fuel oil will be lower concentration than that normally specified for fabric filter designs (0.01 grains/scf). The Department accepts the applicant's proposed control for particulate matter.

Toxic Pollutants (As, Be)

The Department agrees with the applicant's rationale that there are no feasible methods to control beryllium and arsenic except by limiting the inherent quality of the fuel.

Although the emissions of these toxic pollutants could be controlled by particulate control devices, such as a baghouse or

scrubber, the amount of emission reductions would not warrant the added expense. As this is the case, the Department does not believe that the BACT determination would be affected by the emissions of these pollutants.

BACT Determination by DER

Based on the information presented by the applicant and the studies conducted, the Department believes that the use of SCR for NO_x control is not justifiable as BACT. Since these units are intended for peaking service and have operating hours limited to 3,390 hrs/yr/unit, wet injection for NO_x emission control is justifiable as BACT for this facility. BACT for SO₂ and sulfuric acid mist is the burning of fuel oil with a maximum sulfur content of 0.2%. The economics of the 0.2% maximum sulfur limit will be revised at the time of startup (or actual fuel oil contract negotiation) and if warranted, a BACT determination revision.

As this is the case, the BACT emission limitations are established as follows for the 92.9 MW combustion turbines.

<u>Pollutant</u>	<u>Emission Limit</u>	<u>Method of Control</u>
NO _x	42 ppmvd @ 15% O ₂	Wet Injection
SO ₂	222 lbs/hr/unit	Max. 0.2% sulfur content, by weight, No. 2 fuel oil
PM and PM ₁₀	15 lbs/hr/unit	Combustion
CO	54 lbs/hr/unit	Combustion
VOC	5 lbs/hr/unit	Combustion
Arsenic	4.32 x 10 ⁻³ lbs/hr/unit	Fuel Quality
Beryllium	2.57 x 10 ⁻³ lbs/hr/unit	Fuel Quality
H ₂ SO ₄	18 lbs/hr/unit	Max. 0.2% sulfur content, by weight, No. 2 fuel oil

and as follows for the 185.5 MW combustion turbines:

<u>Pollutant</u>	<u>Emission Limit</u>	<u>Method of Control</u>
NO _x	42 ppmvd @ 15% O ₂	Wet Injection
SO ₂	407 lbs/hr/unit	Max. 0.2% sulfur content, by weight, No. 2 fuel oil

PM and PM ₁₀	17 lbs/hr/unit	Combustion
CO	79 lbs/hr/unit	Combustion
VOC	9 lbs/hr/unit	Combustion
Arsenic	7.9 x 10 ⁻³ lbs/hr/unit	Fuel Quality
Beryllium	4.7 x 10 ⁻³ lbs/hr/unit	Fuel Quality
H ₂ SO ₄	28 lbs/hr/unit	Max 0.2% sulfur content, by weight, No. 2 fuel oil

Details of the Analysis May be Obtained by Contacting:

Preston Lewis, P.E., Permit Supervisor
 Department of Environmental Regulation
 Bureau of Air Regulation
 Twin Towers Office Building
 2600 Blair Stone Road
 Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

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

Carol M. Browner
 Carol M. Browner, Secretary
 Dept. of Environmental Regulation

August 17 1992
 Date

August 17 1992
 Date