



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.  
ATLANTA, GEORGIA 30365

4APT-AEB

JUL 26 1991

RECEIVED  
JUL 26 1991  
Division of Air  
Resources Management

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

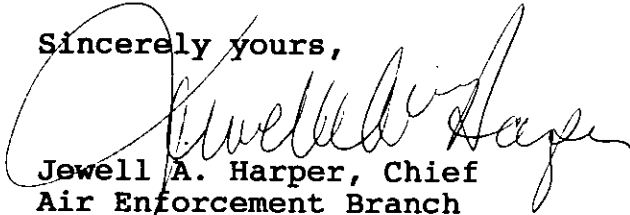
RE: Florida Power Corporation/DeBary Plant (PSD-FL-167)

Dear Mr. Fancy:

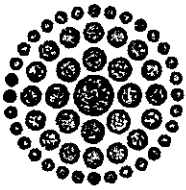
This is to acknowledge receipt of your preliminary determination and draft permit for the above referenced facility's proposed construction, by your letter dated June 14, 1991. The facility will consist of six simple-cycle combustion peaking units, each rated 92.9 MW, fired with No. 2 distillate fuel oil. Your determination proposes to limit NO<sub>x</sub> emissions through wet injection, to limit SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> mist emissions through limiting the sulfur content of the fuel oil, to limit PM and PM<sub>10</sub> through combustion design and the use of clean fuel, to limit CO through combustion design, and to limit Hg, Be, and As emissions through the specifications on No. 2 distillate fuel oil.

We have reviewed the package as submitted and have no adverse comments. Thank you for the opportunity to review and comment on the package. If you have any questions or comments, please contact Mr. Scott Davis of my staff at (404) 347-5014.

Sincerely yours,

  
Jewell A. Harper, Chief  
Air Enforcement Branch  
Air, Pesticides, and Toxics  
Management Division

cc: P. Lewis  
C. Halladay  
B. Andrews  
C. Collins  
K. Kosky, KBN  
C. Harter, NPS



**Florida  
Power**  
CORPORATION

July 18, 1991

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

RECEIVED  
JUL 24 1991  
Division of Air  
Resources Management

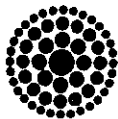
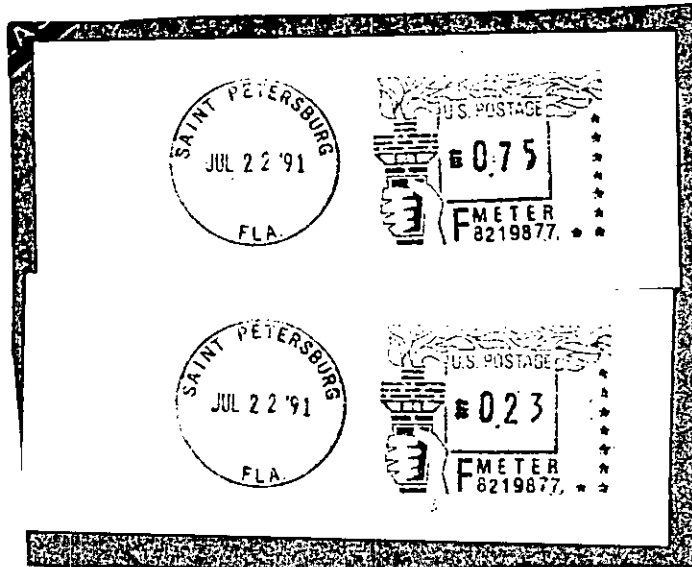
Dear Mr. Fancy:

Re: Volusia County - DeBary Combustion Turbines  
AC 64-191015

This is to respond to our meeting on July 9, 1991, and my memo to you, July 8, 1991, proposing amendments to the proposed FDER draft permit received by Florida Power Corporation (FPC) on June 17, 1991. We have also held subsequent phone conversations with your Mr. Barry Andrews. There were several items that required additional information related to the construction permit. Presented herein is additional information that supports these discussions and our recommended changes to the construction permit.

Sulfur Dioxide (SO<sub>2</sub>) Limitation

FPC has proposed a permit condition that would limit annual average SO<sub>2</sub> emissions equivalent to 38.7 percent capacity factor (full load at 59°F) at an average sulfur content of 0.3 percent sulfur. The FDER has proposed to limit annual average SO<sub>2</sub> emissions equivalent to 33 percent capacity factor under the same conditions. Corresponding SO<sub>2</sub> emission levels equate to 3,386 tons/year (TPY) under the 38.7 percent scenario and 2,888 tons/year (TPY) under the 33 percent scenario. The rationale for FPC's proposed permit condition is twofold. First, the proposed project is unlike any previous combustion turbine or combined cycle project that has been used as a basis of comparison for this BACT review. As we discussed, the proposed DeBary combustion turbines will be constructed as simple cycle units with the ability to fire only distillate oil. Natural gas is not available at the site. FPC requests an average 0.3 percent sulfur, the average being based on a fixed number of gallons of fuel oil burned in order that FPC can manage the sulfur content on a long term basis. In contrast, combustion turbines/combined cycle facilities which are primarily gas fired can better manage their inventory to reduce fuel costs. The higher costs of requiring lower sulfur fuel (e.g., 0.3 percent maximum vs. 0.3 percent average) for a capacity factor greater than 25 percent will result in direct cost increases for FPC's customers. Indeed, as we discussed at the meeting and as demonstrated in our application, FPC's customers would have to pay for the higher fuel costs without obtaining a direct benefit in lower emissions.



## Florida Power Corporation

P.O. Box 14042, St. Petersburg, FL 33733

### MARK CLEARLY

- First Class
- Air Mail
- Third Class
- Registered
- Certified
- Insured
- Parcel Post
- Special Delivery
- Special Handling
- UPS

906 209(S)

TO:

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

Mr. C. H. Fancy  
July 18, 1991  
Page 2

Second, the DeBary plant has 6 existing combustion turbines with a generating capability of 330 MW. If the proposed unit's capacity factor is restricted due to SO<sub>2</sub> emissions, then the older less efficient units would have to operate. Based on the currently permitted SO<sub>2</sub> emissions of the existing units, there would be a net SO<sub>2</sub> emissions increase of 1,233 TPY under the 38.7 percent scenario (or 720 TPY under the 33 percent scenario) from the existing units replacing the generation that could be provided by the new units (i.e., replacing the generation from the new units between 25 percent to 38.7 percent or 33 percent, respectively).

#### Operating Limitation

As we discussed, FPC desires to have the ability to operate an equivalent of 3,390 hours/year at full load and 59°F. This was based on the proposed NO<sub>x</sub> emissions, which have been restricted to 42 ppm (corrected to 15 percent oxygen dry conditions) using GE's "Quiet Combustor", as compared with NO<sub>x</sub> limitations (i.e., 65 ppm) for other similar simple cycle combustion turbines when firing oil. The 3,390 hours per year is equivalent to a 38.7 percent capacity factor. Similar to the comparison made above for SO<sub>2</sub>, if the older less efficient combustion turbines were required to replace the generation that could not be performed by the new units, then a net NO<sub>x</sub> emissions increase of 1,024 TPY would result from operating the older units.

When taken together, the SO<sub>2</sub> emissions (calculated at 38.7 percent or at 33 percent) plus the NO<sub>x</sub> emissions would be reduced by 2,257 TPY or 1,724 TPY, respectively, from the DeBary plant site by allowing the proposed new units to operate up to a 38.7 percent capacity factor.

#### FPC Concession

The FDER has represented its rationale for limiting our capacity factor to 33 percent based upon three other recent determinations. Those being the OUC Indian River peaking facility, the City of Lakeland and the Vero Beach combined cycle installations. We feel that it is inappropriate to use these previous determinations as a precedent for setting BACT for our proposed facility. First, two of these facilities are combined cycle installations not simple cycle turbine installations. Secondly, all three facilities use oil as a secondary fuel. FPC is permitting oil as a primary fuel because gas simply is not available. Thirdly, we have heard no rationale as to why we should be limited to 33 percent for SO<sub>2</sub> other than the fact that three previous utilities proposed, or accepted, a 33 percent capacity factor for a secondary fuel source. The restriction posed by an SO<sub>2</sub> cap, on facilities whose primary fuel generates no SO<sub>2</sub>, makes it obvious why the 33 percent capacity factor was willingly accepted by the three facilities in question.

However, in order to preserve the construction schedule for this project, FPC reluctantly agrees to accept a permit condition that would limit annual average SO<sub>2</sub> emissions equivalent to 33 percent capacity factor (full load at 59°F) at an average sulfur content of 0.3 percent sulfur. This is reflected in Table 1 of the proposed draft permit, FPC Proposed Revision 2, July 16, 1991.

Mr. C. H. Fancy  
July 18, 1991  
Page 3

### Opacity

FPC requests an opacity limitation of 20 percent when firing oil. The basis for this request is GE's guarantee: 20 percent opacity from 0 to 25 percent load, 15 percent opacity from 25 to 50 percent load, and 10 percent opacity from 50 to 100 percent load. This variable opacity guarantee would render a regulatory limit impractical for these units since load can be highly variable. Also, our request for 20 percent opacity is consistent with the BACT limits placed on the FPL Martin and Lauderdale units when firing oil. These units, although advanced combustion turbines, have similar water to fuel ratios for controlling NO<sub>x</sub>, i.e., about 1:1.

Since the amount of water steam injected affects the combustion process and therefore opacity, it stands to reason that the limit we have proposed (i.e., 20 percent) is consistent with previous BACT determinations. Moreover, the proposed NO<sub>x</sub> limitation for the new DeBary units when firing oil is the lowest of any recently authorized in any PSD permit. As we discussed on July 9th and as included in our letter, we would accept a condition to perform particulate testing in the event that the annual opacity measurement exceeded 10 percent average opacity.

### Compliance Determination

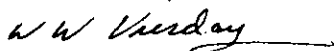
The request to allow an adjustment of heat input rates for ambient temperature has not been specifically addressed in a previous PSD permit. However, all previous PSD permits have emission limits tied to an ambient temperature. It is not possible for all combustion turbines to perform testing during the coldest periods which usually occur during a one week period. Indeed, there is not sufficient stack test teams in the U.S., let alone Florida, to test all combustion turbines during the same week. Coupled with the uncertainty of cold periods in Florida, the requirement to test at 90 to 100 percent of rated capacity is impractical. We therefore request the ambient temperature adjustment in Specific Condition 14.

For Specific Condition 16, we request that monthly analyses be performed from weekly composite samples. Currently, this protocol is used for our combustion turbines. Authorizing this approach would allow us to perform sampling and analysis consistent with current practices.

Attached are our additional recommended changes to the proposed permit that incorporate the comments in this letter.

Please call if there are any questions concerning this response. Your efforts to expedite the issuance of the construction permits for this project would be greatly appreciated. The generation made available by this project will assist Florida Power Corporation in meeting its growing energy demands while applying advanced and efficient process and pollution control technology.

Sincerely,



W. W. Vierday, Manager  
Environmental Programs-Licensing

Attachment

pag/WWV6,Fancy.Let

cc: P. Jervis  
C. Nolladay  
C. Collins, Dist.  
J. Harper, EPA  
CHF/BA

**FPC Proposed Revision 2, July 16, 1991**

**PERMITTEE:**  
Florida Power Corporation  
DeBary Facility  
3201 34th Street South  
St. Petersburg, FL 33733

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992  
County: Volusia  
Latitude/Longitude: 28 54'14"N  
81 19'59"W  
Project: Six 92.9 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 follows:

For six-92.9 MW simple cycle combustion turbines with maximum heat input of ~~1,114~~ 1144 MMBtu/hr/unit at 20°F (oil) to be located at the DeBary facility in DeBary, Florida. The turbines are to be GE PG7111EA equipped with wet injection. The UTM coordinates are Zone 17, 467.5 km East and 3197.2 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 application received December 31, 1990.
2. Department's letter dated January 30, 1991.
3. Florida Power Corporation's letter received February 18, 1991.

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**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 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.

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**GENERAL CONDITIONS:**

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,

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 non-compliance, 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.



PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**GENERAL CONDITIONS:**

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.

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.

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**GENERAL CONDITIONS:**

- 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;
  - 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.

**Rationale: Refer to Table 1. Changes allow operational flexibility in eliminating TPY for each unit.**

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

2. ~~Unless the Department has determined that other concentrations are required to protect public health and safety, the predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:~~

Pollutant	Acceptable Ambient Concentrations ug/m <sup>3</sup>		
	8 hrs	24 hrs	Annual
Beryllium	0.02	0.005	0.0004
Lead	1.50	0.360	0.0900
Inorganic mercury -compounds -all forms of vapor as Hg			0.3000

Rationale: This condition should be omitted from the permit. This has already been or can be determined from existing modeling.

3. Visible emissions shall not exceed ~~10%~~ 20% opacity.

Rationale: The opacity percentage should be changed from 10% to 20% to allow for load changes and low load operation. General Electric will not guarantee an opacity of 10% at low loads on their "Quiet Combustor" combustion system. This type combustor was chosen for providing lower NO<sub>x</sub> emissions reliability.

Operating Rates:

4. ~~These six combustion turbines are allowed to operate for peaking purposes only 2190 HRS/unit/year and/or 25% annual capacity factor.~~

Rationale: This condition should be omitted. Equating hours of operation allowable to fuel consumption was agreed upon in the May 8th meeting with FDER.

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

5. These sources are allowed to use only No. 2 fuel oil with 0.3% average and 0.5% sulfur content maximum, by weight. The average sulfur content is determined for each 126,000,000 gallons of oil fired at the facility.

Rationale: This clause allows an average of 0.3 for 126,000,000 gallons of oil burned. This is a compromise to allow a 0.3% sulfur content for a 33% capacity factor.

6. The permitted materials and utilization rates for the combined simple cycle gas turbines shall not exceed: a. the maximum heat input of 1,144 MMBtu/hr/unit at 59° F ± 20° F. b. ~~maximum~~ annual average No. 2 fuel oil consumption shall not exceed 146,000,520 gal/yr/unit 6 units (as long as the maximum annual SO<sub>2</sub> emissions are not exceeded).

Rationale: Correction for temperature and average conditions are reflected. These changes allow operation consistent with Table 1.

7. Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation and Southeast District offices.

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

#### Compliance Determination

9. Compliance with the NO<sub>x</sub>, SO<sub>2</sub>, CO, ~~PM~~, ~~PM<sub>10</sub>~~, ~~PM/PM<sub>10</sub>~~ and VOC standards shall be determined within 60 days of construction completeness/initial operation and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July, 1990 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

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**SPECIFIC CONDITIONS:**

- Method 5. Determination of Particulate Matter Emissions from Stationary Sources
- Method 9. Determination of the Opacity 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

**Rationale: The PM and the PM<sub>10</sub> standards are considered equal for simple cycle combustion turbines.**

10. Method 5 must be ~~used~~ performed on one gas turbine to determine the initial compliance status of this **type** unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded under steady state conditions.

**Rationale: This condition provides for one Method 5 Test to show compliance. Since all units are identical, the results from one unit tested would be representative of PM emissions from each unit.**

11. Compliance with the SO<sub>2</sub> emission limit can also be determined by calculations based on fuel analysis using ~~ASTM D2880-71~~ ASTM D4292 or ASTM D1552 for the sulfur content of liquid fuels and ~~ASTM D1072-80, D3031-81, D4084-82 or D3246-81~~ for sulfur content of ~~gaseous fuels.~~

**Rationale: The ASTM D2880-71 standard required should be changed to ASTM D4292 or ASTM D1552. These are the current standards for sulfur analysis. The test standards listed for gaseous fuels should be eliminated. These units do not have gaseous fuels.**

12. Compliance with the total volatile organic compound emission limits will be assumed, provided the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

13. During performance tests, to determine compliance with the proposed NO<sub>x</sub> standard, measured NO<sub>x</sub> emissions at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

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

where:

NO<sub>x</sub> = Emissions of NO<sub>x</sub> at 15 percent oxygen and ISO standard ambient conditions.

NO<sub>x obs</sub> = Measured NO<sub>x</sub> emission at 15 percent oxygen, ppmv.

P<sub>ref</sub> = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P<sub>obs</sub> = Measured combustor inlet absolute pressure at test ambient pressure.

#### SPECIFIC CONDITIONS:

H<sub>obs</sub> = Specific humidity of ambient air at test.

e = Transcendental constant (2.718).

T<sub>AMB</sub> = 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 15 days in writing in advance of the compliance test(s). 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.

**Rationale: The statement "as adjusted for ambient temperature" was added to this condition. Data from permit application can be used to interpolate results for different ambient conditions.**

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

15. A continuous monitoring system shall be installed to monitor and record the fuel consumption. Water injection shall be utilized for NO<sub>x</sub> control. The water to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be continuously monitored. The system shall meet the requirements of 40 CFR Part 60, Subpart GG. If rules are eventually drafted, subsequent to the clean air act amendments, that require CEMS to be installed for this specific installation, then the permittee will comply. ~~Continuous monitoring shall also be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, for the peaking cycle unit to monitor nitrogen oxides emissions.~~

- a. ~~Each continuous emission monitoring system (CEMS) shall meet performance specifications of 40 CFR 60, Appendix B.~~
- b. ~~CEMS data shall be recorded and reported in accordance with Chapter 17-2, F.A.C., and 40 CFR 60. The record shall include periods of startup, shutdown and malfunction in accordance with F.A.C. Rule 17-2.250, Excess Emissions.~~
- e. ~~A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset conditions or preventable equipment breakdown shall not be considered malfunctions.~~
- d. ~~The procedures under 40 CFR 60.13 shall be followed for installation, evaluation and operation of all CEMS.~~
- e. ~~For purposes of reports required under this permit, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. 22 herein, which exceeds the applicable emission limits in Condition No. 1.~~

Rationale: The continuous emissions monitoring requirement for NO<sub>x</sub> should be changed to monitoring on a water to fuel ratio. A NO<sub>x</sub> CEM is not necessary with water injection. This requirement would be costly and require special systems (i.e., stack gas cooling required for sample probe).

PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

**SPECIFIC CONDITIONS:**

16. Sulfur, nitrogen content and lower heating value of the fuel being fired in the combustion turbines shall be recorded ~~daily~~ **based upon a monthly analyses performed from weekly composite samples.** The records of fuel oil usage shall be kept by the company for a two-year period for regulatory agency inspection purposes.

**Rationale: The required frequency of a fuel analysis should be changed from daily to analyzing a monthly composite sample. The fuel analysis does not change significantly on a day to day basis.**

17. ~~Compliance with the acceptable ambient concentrations for Be, Lead, and Hg emissions shall be demonstrated based on calculations certified by a Professional Engineer registered in Florida, using actual operating conditions. Determination of the ambient concentrations for chemical compounds shall be determined by Department approved dispersion modeling. This compliance determination shall be made available upon request.~~

**Rationale: This condition should be omitted from the permit. This has already been or can be determined from existing modeling.**

**Rule Requirements**

18. 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).

19. 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.

20. 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)).

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



PERMITTEE:  
Florida Power Corp.

Permit Number: AC 64-191015  
PSD-FL-167  
Expiration Date: July 31, 1992

22. Pursuant to F.A.C. Rule 17-2.215(2), Emission Estimates, General Provisions, 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 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.

Rationale: The second sentence in this condition should be eliminated from the permit. The information required in the annual report is specified in F.A.C. Rule 17-2.210(2).

23. 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).

**SPECIFIC CONDITIONS:**

24. 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 \_\_\_\_\_ day  
of \_\_\_\_\_, 1991

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

Carol M. Browner  
Secretary

**TABLE 1**  
**ALLOWABLE EMISSION LIMITS**  
**Simple Cycle Combustion Turbine**

Pollutant	Standard Oil Firing	Each lb/hr(a)	Unit T/yr(b)	Total lb/hr	Total 6 Units T/yr	Basis
NO <sub>x</sub>	42 ppm at 15% oxygen-dry basis	182	<del>109</del>	<del>1092</del>	1851(b) <del>1195</del>	BACT
SO <sub>2</sub>	No. 2 fuel oil with 0.3% avg. and 0.5% max. sulfur	555	<del>600</del>	<del>3330</del>	2888(c) <del>3648</del>	BACT
PM/PM <sub>10</sub>	0.025 lb/MMBtu	15	<del>16</del>	<del>90</del>	153(b) <del>96</del>	BACT
VOC	-	5	<del>5</del>	<del>30</del>	51(b) <del>33</del>	BACT
CO	-	54	<del>60</del>	<del>324</del>	547(b) <del>354</del>	BACT
Sulfuric Acid Mist	No. 2 fuel oil with 0.3% avg. and 0.5% max. sulfur	76	<del>83</del>	<del>454</del>	773(b) <del>499</del>	BACT

(a) Emission rates based on 59°F and 15% O<sub>2</sub>.

(b) ~~Annual hours 2190 per year and 25% capacity factor.~~ Equivalent to 3390 hours per year at peak load, and 38.7% capacity factor. If less than 6 units are constructed, annual emissions are prorated for the actual number of units constructed (i.e., if 4 units are constructed, the annual NO<sub>x</sub> emission limit is 1851 TPY \* (4/6) = 1234 TPY).

(c) Total TPY cap for SO<sub>2</sub> is calculated assuming a 33% capacity factor and a fuel sulfur content of .3% avg. If less than 6 units are constructed, annual emissions are prorated for the actual number of units constructed (i.e., if 4 units are constructed, the annual SO<sub>2</sub> emission limit is 2888 TPY \* (4/6) = 1925 TPY).

I N T E R O F F I C E   M E M O R A N D U M

**Date:** 01-Jul-1991 04:40pm GMT  
**From:** Iris Littleton  
LITTLETON\_I  
**Dept:** Office General Counsel  
**Tel No:** 904/488-9730

**TO:** Alex Alexander ( ALEXANDER, ALEX )  
**CC:** Dottie Diltz ( DILTZ\_D )  
**CC:** Pat Manning ( MANNING\_P )  
**Subject:** New OGC Case Assignments

**TO:** Alex Alexander  
**FROM:** Iris - OGC - Tallahassee

Received 6/26/91 request for an Administrative Hearing from David and Eleanor Shreve against intent to issue permit DC05-194008 to Florida Cities Water Company.

Received 6/26/91 request for an Extension of Time from Florida Power Corp. concerning permit AC64-191015.

Received 6/21/91 request for an Extension of Time from I.G. Fonte, Jr., dba Import Used Auto Parts concerning permit WT48-167515.