

**Florida  
Power**  
CORPORATION

*Passion - cry for file  
also, send M.B. a copy.  
and  
Jere  
done  
3/3*

**RECEIVED**  
NOV 01 1993  
Division of Air  
Resources Management

October 28, 1993

Mr. Alexander Alexander, P.E.  
Director, Central District  
Florida Department of Environmental Protection  
3319 Maguire Boulevard, Suite 232  
Orlando, FL 32803-3767

Dear Mr. Alexander:

Re: Compliance Testing Update for New Combustion Turbines at Intercession City  
DEP Permit Number AC49-203114

On October 5, 1993, Florida Power Corporation (FPC) provided the Department of Environmental Protection (DEP) notification of the commencement of compliance testing of the new combustion turbines at FPC's Intercession City electric generating station. The testing will begin on November 8, 1993. FPC would like to amend the test schedule for two of the four units.

Units P8 and P10, which were initially started in July 1993, will be tested beginning on November 8 as planned. FPC wishes to test Units P7 and P9, which were started in late August and early September, in the December-January time period. Particulate testing, which is to be performed on one of the four new units, will be completed on either P7 or P9. This schedule will help FPC maximize the opportunity to test the units for compliance during the cooler winter months. FPC will notify DEP at least 30 days prior to the commencement of testing on Units P7 and P9. Compliance test reports will be submitted to DEP within the required 180 day period for all four units. This approach has been discussed with Mr. Garry Kuberski and he has given his concurrence.

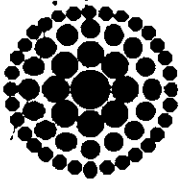
Please feel free to contact me at (813) 866-4344 if you have any questions.

Sincerely,

*J. Michael Kennedy*

J. Michael Kennedy  
Senior Environmental Specialist

cc: Mr. Charles Collins, DEP Central District  
Mr. Garry Kuberski, DEP Central District  
~~Mr. John Brown, DEP Tallahassee~~



**Florida  
Power**  
CORPORATION

*Several  
of these another  
modifications better  
include with the  
attached.*

RECEIVED GR

October 25, 1993

OCT 28 1993

10/28

Mr. John Brown, P.E.  
Administrator, Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Division of Air  
Resources Management

PS

*Please copy  
for Potty-file*

Dear Mr. Brown:

Re: Intercession City - New Combustion Turbines  
DEP Permit Number AC49-203114 ; PSD-FL-180

Florida Power Corporation (FPC) requests concurrence from the Department of Environmental Protection (DEP) regarding the language contained in the permit referenced above. Specifically, FPC wishes to obtain concurrence from DEP on FPC's understanding of the specific conditions for compliance testing.

Four GE Frame 7EA combustion turbines have been constructed under AC49-203114 at FPC's Intercession City electric generating station. Compliance testing for these units is scheduled to begin on November 8, 1993. Specific Condition 14 contains the following language regarding unit operation during compliance testing:

*The sources shall operate between 90% and 100% of permitted capacity during the compliance test(s) as adjusted for ambient temperature. (Emphasis added)*

The adjustment for ambient temperature is needed because of the unique dependence of unit heat input capacity on ambient temperature, which is associated with combustion turbines. Specific Condition 4(D) reflects this dependence by giving the maximum heat input capacity of the Frame 7EA machines for a range of ambient temperatures. This information originated from manufacturer's performance data, a copy of which is attached in graph form.

It is FPC's interpretation of Specific Condition 14 that the units will be considered by DEP 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. Therefore, if compliance is demonstrated under these conditions, then the units will be permitted to operate at capacity throughout the ambient temperature range.

Mr. John Brown  
October 25, 1993  
Page Two

Although the language in Specific Condition 14 seems clear and is consistent with the normal operating characteristics of combustion turbines, staff in DEP's Central District have indicated that ambient temperature during the compliance tests will not be considered. FPC requests that DEP indicate whether FPC's interpretation given above is correct. Since compliance testing will begin on November 8, a prompt reply would be much appreciated.

Please contact Mr. Mike Kennedy at (813) 866-4344 if you have any questions or if you need additional information.

Sincerely,

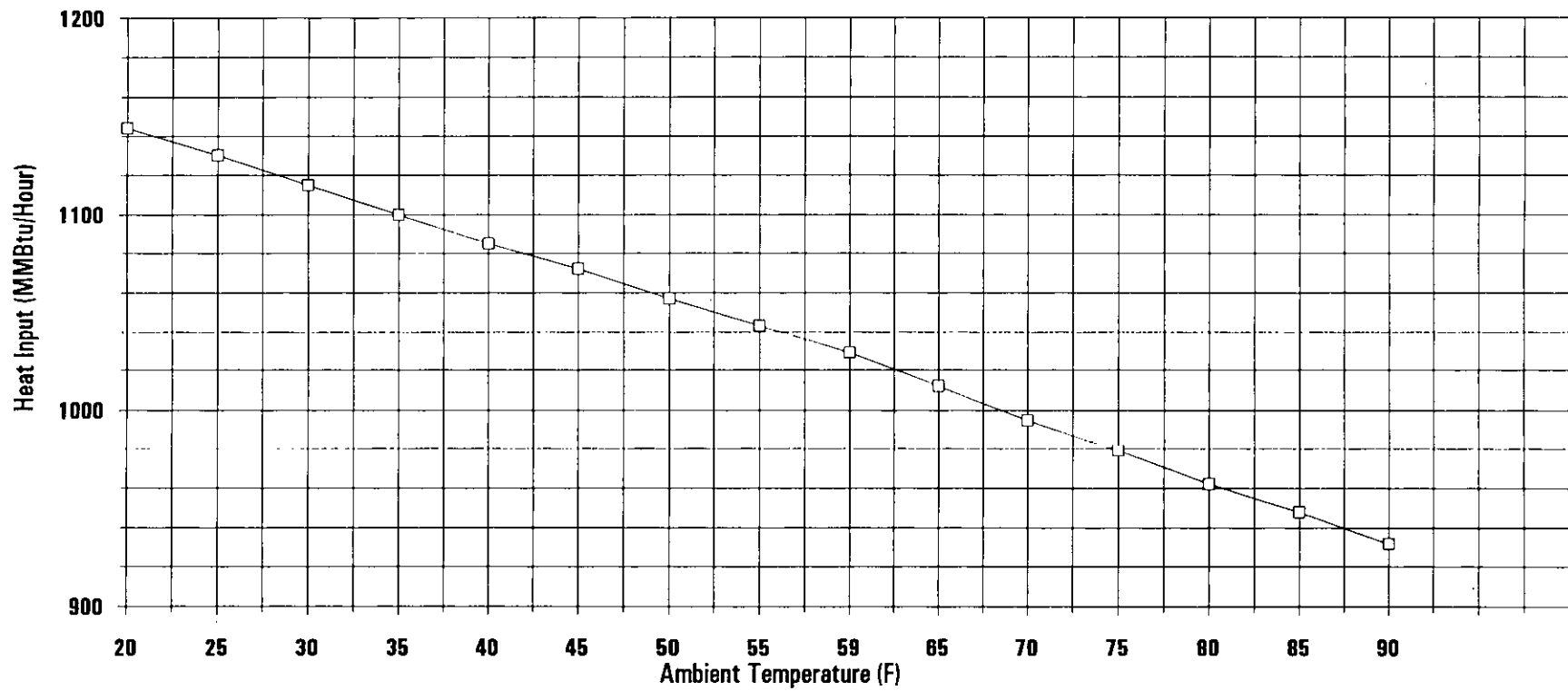


W. Jeffrey Pardue, C.E.P., Manager  
Environmental Programs

Attachment

cc: Mr. Alexander Alexander, DEP Central District  
Mr. Charles Collins, DEP Central District

## Intercession City New Peakers - Heat Input vs. Temperature



input-for-the-tested-operating-temperature- Testing of emissions shall be conducted with the source operating at capacity (maximum heat rate input for the tested operating temperature). Capacity is defined as 90-100% of rated capacity. If it is impracticable to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. Annual (A) compliance tests shall be performed on each CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with 40 CFR 60, Appendix A, as adopted by reference in Rule 17-297, F.A.C.7--and-the requirements-of-40-CFR-75:

- a. Reference Method 5B for PM (I, A, for oil only).
- b. Reference Method 8 for sulfuric acid mist (I, for oil only).
- c. Reference Method 9 for VE (I, A).
- d. Reference Method 10 for CO (I, A).
- e. Reference Method 20 for NOx (I, A).
- f. Reference Method 18 for VOC (I, A).
- g. Trace elements of ~~Lead-(Pb)~~ Beryllium (Be) and Arsenic (As) shall be tested (I, for oil only) using EMTIC Interim Test Methods. As an alternative, Method 104 for Beryllium (Be) may be used; or Be and Pb ~~As~~ may be determined from fuel analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.
- h. ASTM D 2880-71 4294 (or equivalent) for sulfur content of distillate oil (I,A), which can be used for determining SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions annually.
- i. ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 (or equivalent) for sulfur content of natural gas (I, and A if deemed necessary by DEP).

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

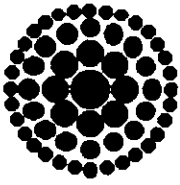
2. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent by weight. Compliance shall be demonstrated in accordance with the requirements of 40 CFR 60.334 testing for sulfur content of the fuel oil in the storage

### XIII. AIR

The construction and operation of Polk County Site (Project) shall be in accordance with all applicable provisions of Chapters 17-210 to 297, F.A.C. The following emission limitations and conditions reflect BACT determinations for the Phase IA - 470 MW (two combined cycle combustion turbines and auxiliary equipment) of generating capacity for which the need has been determined. BACT determinations for the remaining phases will be made upon review of supplemental applications. In addition to the foregoing, the Project shall comply with the following conditions of certification as indicated.

#### A. General Requirements

1. The maximum heat input to each combustion turbine (CT) shall neither exceed ~~17,573~~ 1,510 MMBtu/hr while firing natural gas, nor ~~17,800~~ 1,730 MMBtu/hr while firing fuel oil (at ~~an ambient temperature of 40°F or greater~~ ISO conditions). Heat input may vary depending on ambient conditions and the CT characteristics. Therefore, performance data will be derived after compliance test and made part of the operating permit. Manufacturer's curves or equations for correction to other ambient conditions shall be provided to DEP at least 90 days before compliance testing.
2. Each of the two CTs in Phase IA may operate continuously, i.e., 8,760 hrs/year.
3. Only natural gas (NG) or low sulfur fuel oil shall be fired in each combustion turbine and the auxiliary boiler. Only low sulfur fuel oil shall be fired in the diesel generator. The maximum sulfur content of the low sulfur fuel oil shall not exceed 0.05 percent, by weight.
4. The maximum heat input to the auxiliary boiler shall not exceed 99 MM Btu/hr when firing NG or No. 2 fuel oil with 0.05 percent maximum sulfur content (by weight). All fuel consumption must be continuously measured and recorded for the auxiliary boiler.
5. The maximum allowable fuel oil consumption for the two turbines is 13,762,806 gallons per year, which is equivalent of an aggregate of 1,000 hours per year of operation at full load.
6. The permittee shall have the option of installing duct module(s) suitable for possible future installation of an oxidation catalysts and/or SCR equipment on each combined cycle generating unit. In the event that the module(s) are not installed in the Heat Recovery System Generator (HRSG) modification cost will not be included in any future economic evaluation to justify a SCR or oxidation catalyst utilization.



**Florida  
Power**  
CORPORATION

*Pathy, give to Jensen with (IF Antareson) city  
copies to C.L.  
and D.O.  
Preston  
10/14*

Certified Mail P 627 945 285

October 7, 1993

Mr. John Brown, P.E.  
Administrator, Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

**RECEIVED**  
OCT 14 1993  
Division of Air  
Resources Management

Dear Mr. Brown:

*Intercession ?*

Re: Request for Construction Permit Amendment  
DEP Permit Number AC49-203114 ; PSD-FL-180

As a result of a conversation between Mr. Mike Kennedy of my staff and Mr. Charles Collins of the Central District of the Department of Environmental Protection (DEP), Florida Power Corporation (FPC) requests an amendment to the construction permit referenced above. This request supplements the modification request which FPC submitted to DEP on July 26, 1993.

On August 11, 1993 DEP granted FPC a permit amendment for the new combustion turbines at the DeBary facility (copy attached). FPC is constructing new combustion turbines, which are identical to the DeBary turbines, at its Intercession City generating station. The DeBary permit amendment changed specific allowable emission limits to a specification to use No. 2 fuel oil as the method of control for compounds such as arsenic and beryllium. As the amendment letter stated, these compounds are fuel constituents over which there is no control. Emission limitations are therefore of little use.

For the Intercession City permit, FPC requests that the emission limitations for arsenic and beryllium contained on page 6 of the BACT determination be changed to a specification of the use of No. 2 fuel oil. This change will make the permit less burdensome and will make it consistent with the DeBary permit. Mr. Collins has given his concurrence with the proposed change.

Mr. John Brown  
October 7, 1993  
Page Two

Please contact Mr. Mike Kennedy at (813) 866-4344 if you have any questions or if you need additional information.

Sincerely,



W. Jeffrey Pardue, C.E.P., Manager  
Environmental Programs

Attachment

cc: Mr. Alexander Alexander, DEP Central District  
Mr. Charles Collins, DEP Central District