Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

February 17, 2003

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Wilson B. Hicks, Plant Manager
Florida Power Corporation
University of Florida Cogen Plant
Mowry Road, Bldg. 82, UF
Gainesville, FL 32611-2295

Re: DEP File No. 0010001-004-AC (Request for Increase in CT Permitted Heat Input)

Dear Mr. Hicks:

This is the Department's permitting action in response to the referenced request received from Florida Power Corporation (FPC) on May 7, 2002. FPC submitted a request to modify Permit No. 0010001-003-AC by increasing the permitted heat input to the UF combustion turbine (CT) from the current 392 mmBTU/hr to 408 mmBTU/hr at 59°F. The adjustment reflects the engine's actual performance curve. On June 6, the Department replied to FPC that the requested increase amounting to about 3 MW in the CT's output rating would trigger retroactive Prevention of Significant Deterioration (PSD) review for NOx from the CT if no offsets are applied such as a further limitation on operating hours. This was due to the fact that PSD automatically applied upon reaching the threshold of 40 tons per year, since PSD review was avoided for the original turbine based on a netting increase of 39.7 tons of NOx per year.

On November 8, 2002, FPC modified its application by proposing that the baseline annual fuel usage cap for the turbine be replaced with a cap limiting total annual NOx emissions from the turbine to 141 TPY, as verified by the existing continuous NOx monitor. This proposal is acceptable to the Department since the original PSD-baseline turbine installed in 1994 was replaced in 2001 with a more efficient, less polluting model and thus the 2001 actual average lbs NOx/hr is 12.3 percent lower than the 1994 actual average. Therefore, the expiration date of Permit No. 0010001-003-AC is hereby extended to March 31, 2003 and Section III of the permit is otherwise modified as indicated below:

SPECIFIC CONDITION No. 5

Combustion Turbine/Duct Burner Capacity: The heat input to the combustion turbine shall not exceed ~~392 million Btu per hour (mmBtu/hr) when firing natural gas and 384 mmBtu/hr when firing fuel oil~~ **the values indicated on the turbine manufacturer's heat input vs. power output curve attached to this permit (Attachment C)**. The heat input to the duct burner system shall not exceed 188 MMBtu/hr on natural gas (no oil firing). The maximum heat input limits are based on the lower heating value (LHV) of each fuel, 100% load, and ambient conditions of 59°F temperature, 60% relative humidity, and 14.7 psia. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department within 45 days of completing the initial compliance testing. [Rule 62-210.200, F.A.C. (Potential to Emit), Permit 0010001-001-AV]

SPECIFIC CONDITION No. 6

Hours of Operation/Fuel Usage Limitations: Combustion turbine/duct burner operation at maximum firing rates shall be limited to 7,211 hours per year (to prevent retroactive PSD applicability for NOx under PSD-FL-181, pursuant to Rule 62-212.400(5), F.A.C., by reaching the 40 tons per year PSD applicability threshold). The turbine/duct burner may operate at lower than maximum rates for more hours per year provided that ~~the annual fuel consumption limitations are not exceeded~~ **NOx emissions from the turbine alone do not exceed 141 tons per year** and that facility-wide NOx emissions do not exceed 194.3 TPY. ~~The total annual fuel usage for the combustion turbine and the duct burner combined shall not exceed 3.48 trillion BTU (includes up to 635,100 gallons No. 2 fuel oil fired in the turbine).~~ The annual fuel usage by the duct burner is limited to 519.5 million ft^3 natural gas.

EU 003 and 004 (Boilers Nos. 4 and 5) shall be allowed to operate as required for backup only as long as the facility-wide NOx cap of 194.3 TPY is not exceeded for any calendar year. Emission factors pursuant to condition C.14 of the facility's Title V permit shall be applied to the fuel consumed by Boilers Nos. 4 and 5 to determine compliance with the facility cap. The NOx emissions calculations shall be submitted to the Compliance Authority with the Annual Operating Report. The permittee shall install and operate a continuous monitoring system to monitor and record fuel consumption as required by 40 CFR 60.334. [Applicant Request, Rules 62-210.200 (Definitions), 62-212.400(5), F.A.C., 40 CFR 60 Subpart GG]

SPECIFIC CONDITION No. 8.a.1

When firing natural gas, NO_X emissions from the combustion turbine shall not exceed any of the following: 25 ppmvd (corrected to 15% oxygen), 39.6 pounds per hour, 141* tons per year **(141 tons per year includes total annual NOx emissions from firing natural gas or distillate oil in the combustion turbine)**. [Applicant Request*, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]

SPECIFIC CONDITION No. 8.a.2

When firing distillate oil, NO_X emissions from the combustion turbine shall not exceed any of the following: 42.0 ppmvd corrected to 15% oxygen, 66.3 pounds per hour~~, 7.3 tons per year~~ **(141 tons per year includes total annual NOx emissions from firing natural gas or distillate oil in the combustion turbine)**. The nitrogen content of the fuel oil shall be monitored in accordance with 40 CFR 60.334(b). [40 CFR 60 Subpart GG, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]

SPECIFIC CONDITION No. 8.c.3

Ongoing and annual compliance for EU 001 and shall be determined by the existing NOx CEM system on a 30-day rolling average basis and reported as required by the current Title V permit, except for the following addition/revision: *To verify **compliance with the 141 TPY cap for EU 001 and** facility-wide compliance with the 194.3 TPY cap for NOx emissions including **EU 002**, EU 003 and 004 (**Duct burner**, Boilers Nos. 4 and 5), and to provide reasonable assurance that NOx emissions will not be PSD-significant, CEM records along with cumulative fuel consumption records for EU 003 and 004 shall be kept and maintained by the permittee. Total NOx emissions for ~~the~~ **both** calendar year **caps** shall be reported in the facility's annual operating report.* [PSD-FL-181, Rule 62-212.400, F.A.C., Permit 0010001-001-AV]

SPECIFIC CONDITION No. 18

Fuel Consumption Monitoring of Operations: ~~To demonstrate compliance with the fuel consumption limits, t~~The permittee shall monitor and record the rates of consumption of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. ~~To demonstrate compliance with the turbine capacity requirements, t~~The permittee shall monitor and record the operating rate of the combustion turbine on a daily average basis, considering the number of hours of operation during each day (including the times of startup, shutdown and malfunction). Such monitoring shall be made using a monitoring component of the CEM system required above, or by monitoring daily rates of consumption and heat

content of each allowable fuel in accordance with the provisions of 40 CFR 75 Appendix D. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Permit Modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/20/03 to the person(s) listed:

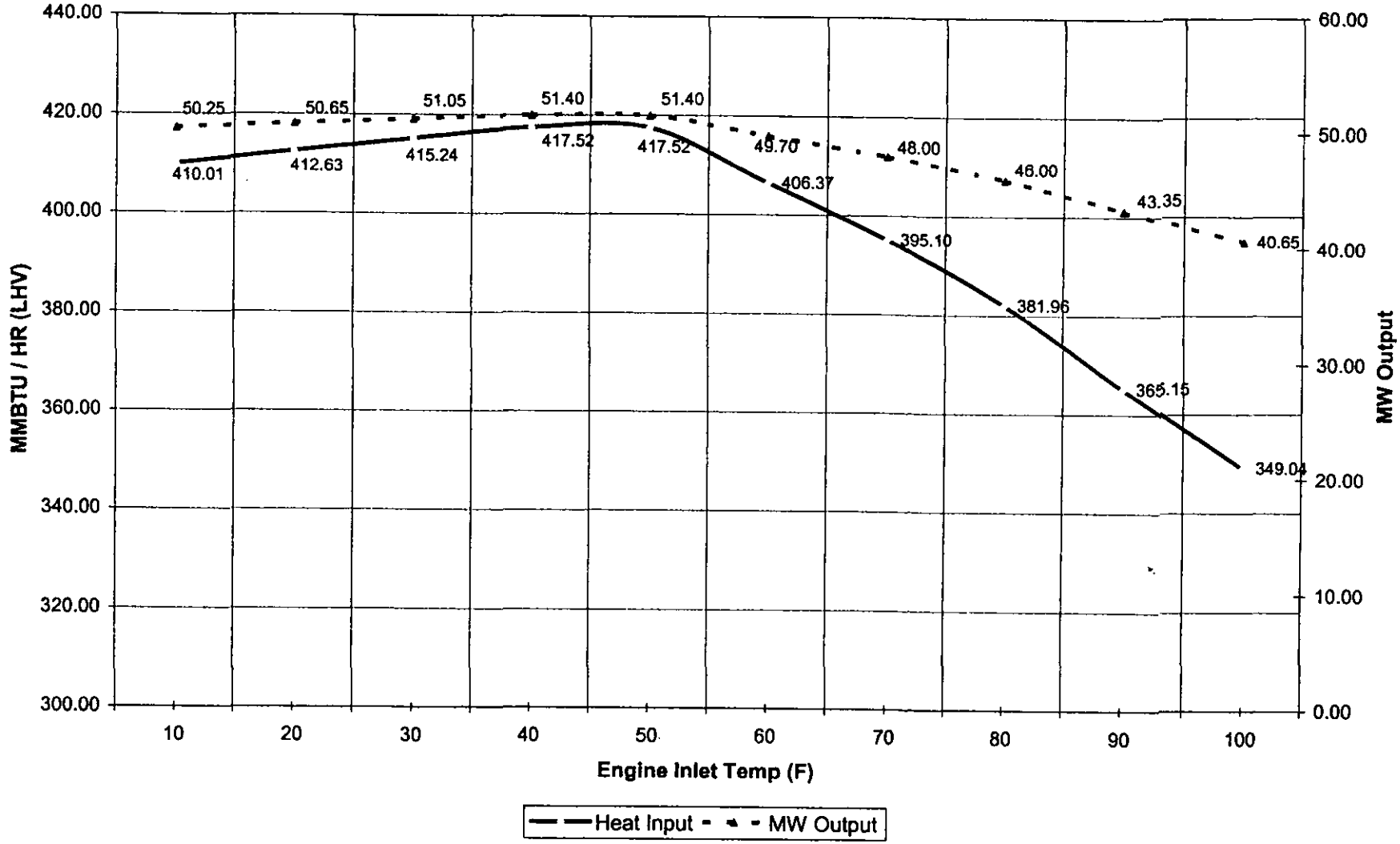
Wilson B. Hicks, FPC*
Mike Kennedy, FPC
Chris Kirts, NED
Scott Osbourn, P.E.

Clerk Stamp

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

Victoria Gibson / February 20, 2003
(Clerk) (Date)

Engine Inlet Temp. Vs. Heat Input (LHV) and MW Output
LM6000PC-Esprint - University of Florida Cogen - Florida Power



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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Wilson B. Hicks, Plant Manager
Florida Power Corporation
University of Florida Cogen Plant
Mowry Road, Bldg. 82, UF
Gainesville, FL 32611-2295

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery FEB 24 20[illegible]

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PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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Wilson B. Hicks
Street, Apt. No.; or PO Box No.
Mowry Rd., Bldg. 82, UF
City, State, ZIP+4
Gainesville, FL 32611-2295

PS Form 3800, January 2001 See Reverse for Instructions

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FINAL DETERMINATION

DEP File No. 0010001-004-AC

FPC University of Florida Cogeneration Plant
Alachua County, Florida

An Intent to Issue an air construction permit modification to revise some specific conditions and to allow for the adjustment of the combustion turbine (CT) heat input to reflect actual performance capabilities while capping CT emissions of nitrogen oxides (NOx) at 141 tons per year was distributed on January 17, 2003. This FPC facility is located at Gainesville, Alachua County, Florida.

The Public Notice of Intent to Issue Air Construction Permit was published in the Gainesville Sun on February 1, 2003. No comments were received as a result of the Public Notice period.

Based on subsequent internal review and for the sake of clarity, Unit 002 (duct burner) was specifically included in the final facility-wide cap of 194.3 tons of NOx.

The final action of the Department will be to issue the permit modification as noted during the Public Notice period.

Memorandum

Florida Department of Environmental Protection

TO: Howard L. Rhodes

THRU: Al Linero/Trina L. Vielhauer 2/17

FROM: John Reynolds/Teresa Heron

DATE: February 17, 2003

SUBJECT: Draft Permit Amendment for Florida Power Corporation/University of Florida
Cogen Plant – Alachua County
Permit No. 0010001-004-AC

Attached for approval and signature is the final permit amendment that extends and revises certain conditions in FPC's existing air construction permit, 0010001-003-AC. This permit was issued on May 18, 2001 to replace the existing 43 MW GE LM6000 PA aeroderivative combustion turbine (EU No. 001) with a more efficient GE LM6000 PC ESPRINT unit rated at 48 MW. The present application reflects the as-built combustion turbine with a slightly greater heat input.

This proposed amendment avoids triggering PSD since the original PSD-baseline turbine installed in 1994 was replaced in 2001 with a more efficient, less polluting model and thus the 2001actual average lbs NOx/hr is 12.3 percent lower than the 1994 actual average. The pre-existing facility-wide NOx emissions cap of 194.3 TPY is sufficient to insure PSD is not triggered by this project.

The expiration date of Permit No. 0010001-003-AC is extended from December 31, 2002 to March 31, 2003.

We recommend your approval and signature.

AL/th