

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

IN RE: SITE CERTIFICATION	)	
DEERHAVEN GENERATING STATION	)	
GAINESVILLE REGIONAL UTILITIES	)	CERTIFICATION NO. PA 74-04D
<u>ALACHUA COUNTY, FLORIDA</u>	/	OGC NO. 93-4204

**FINAL ORDER MODIFYING
CONDITIONS OF CERTIFICATION**

On May 16, 1978, the Siting Board, issued a final order approving certification for the Gainesville Regional Utilities Deerhaven Generating Station. That certification order approved the construction and operation of a coal fired, steam-electric generating facility and associated facilities to be located in Alachua County, Florida.

On March 22, 1994, Gainesville Regional Utilities (GRU) filed requests to modify the conditions of certification pursuant to Section 403.516(1)(b), Florida Statutes (F.S.). The GRU requested that the conditions be modified to approve the construction and operation on site of a 74 megawatt (nominal) combustion turbine burning either natural gas or distillate fuel oil.

On April 2, 1994, notice of the proposed modification was published in the Gainesville Sun. On December 23, 1994, Notice of Intent to Issue Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. On December 21, 1994, all of the parties to the original proceeding were mailed copies of the petition to modify. The notices specified that a hearing would be held if a party to the original certification hearing objects within 45 days from receipt of the proposed notice of modification or if a person whose substantial interests will be affected by the proposed modification objects in

writing within 30 days after issuance of the public notice. No timely written objection to the proposed modifications was received by the Department.

One of the persons who was mailed a copy of the Department's Notice of Intent to Issue was Mr. Dan Hargrove of Gainesville. Previously, by letter dated August 24, 1994, Mr. Hargrove had expressed his objection to the modification requested by GRU. Mr. Hargrove, who had not been a party to the original certification proceeding, objected to the proposed increase in generating capacity on the grounds that GRU had failed to live up to a stipulation entered into in 1978 between GRU and that Gainesville Chapter of the Sierra Club.

On January 19, 1995 the Department mailed Mr. Hargrove a copy of the Notice of Intent to Issue. The return receipt indicates that Mr. Hargrove received the document on January 23, 1995. On February 6, 1995, the Department received a letter from Mr. Hargrove dated February 2, 1995, which was styled a written objection to the "construction of Deerhaven #3 power plant by GRU." The letter reiterated Mr. Hargrove's assertion the GRU had not lived up to its stipulation of April 5, 1978.

Mr. Hargrove's objection is not timely. Section 403.516, Florida Statutes, requires that timely written objections to a proposed modification must be filed within 30 days of public notice of the modification. Public Notice was provided by means of publication in the Florida Administrative Weekly on December 23, 1994. Consequently, the deadline for objection in this matter was January 23, 1995.

Accordingly, in the absence of any timely objection, IT IS ORDERED:

The proposed changes to the Deerhaven Generating Station described in the March 22, 1994, request for modification, are APPROVED. Pursuant to Section 403.516(l)(b), F.S., the Department hereby MODIFIES the conditions of certification for the Deerhaven Generating Station as follows:

H. Deerhaven Combustion Turbine No. 3

The construction and operation of the Gainesville Regional Utilities (GRU) Deerhaven Combustion Turbine #3 (DHCT3) shall be in accordance with all applicable provisions of Chapters 62-210 through 297 and 62-4, Florida Administrative Code (F.A.C.), and 40 CFR 60, Subpart A, Subpart GG, Appendix A and Appendix B (1993 version). The following emission limitations and conditions reflect the BACT determinations for the DHCT3. In addition to the foregoing, the project shall comply with the following conditions of certification:

General Operating Requirements

1. The maximum heat input rates, based on high heating values of each fuel, to the DHCT3 and at ISO conditions (i.e., 59° F, 60% relative humidity and 101.3 kilopascals pressure), shall not exceed 971.1 MMBTU/hr, while firing natural gas, nor 990.6 MMBTU/hr, while firing fuel oil. Heat input will vary depending on ambient conditions and the DHCT3 characteristics. Manufacturer's curves or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) at least 90 days before initial compliance testing.
2. The DHCT3 is allowed to operate up to 3900 hours per year, but not to exceed 2000 hours while firing fuel oil.
3. Only natural gas (NG) or No. 2 fuel oil shall be fired in the combustion turbine. The maximum sulfur content of the fuel oil shall not exceed 0.05 percent, by weight. GRU has established that there is approximately 55 hours of full load operation of fuel oil, which contains nominally 0.25% sulfur content, by weight, remaining in the fuel storage tank. GRU will be allowed to deplete this reserve by firing the fuel oil in the DHCT3. However, all future deliveries of fuel oil for the

DHCT3 shall meet the BACT requirement, which limits the fuel oil sulfur content to no more than 0.05%, by weight. Fuel sulfur content shall be determined and recorded each time fuel is transferred into the bulk storage tank(s).

4. During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques, such as covering and/or application of water or chemicals to the affected areas pursuant to Rule 62-296.310(3), F.A.C. - Unconfined Emissions of Particulate Matter.

5. Any change in the method of operation, equipment or operating hours, pursuant to Rule 62-212.200, F.A.C., Definitions- Modifications, shall be submitted to the DEP's Bureau of Air Regulation office and Northeast District office.

Emission Limits

6. The maximum allowable emissions from the DHCT3, when firing natural gas or No. 2 fuel oil, in accordance with the BACT determination, and at 95 - 100% percent load based on the manufacturer's curves submitted to the DEP, shall not exceed the following limits except during periods of start up, shutdown, and malfunction pursuant to Rule 62-210.700, F.A.C.:

MAXIMUM ALLOWABLE EMISSION LIMITS

<u>POLLUTANT</u>	<u>FUEL</u>	<u>BACT STANDARD</u>	<u>LBS/HR</u>	<u>*TPY</u>
<u>NO_x</u>	<u>Gas</u>	<u>15 ppmvd @ 15% Oxygen</u>	<u>58</u>	<u>113 (a)</u>
	<u>Oil</u>	<u>42 ppmvd e 15% Oxygen</u>	<u>184</u>	<u>184 (b)</u>
			<u>combined (c)</u>	<u>239</u>
<u>PM₁₀</u>	<u>Gas</u>	<u>Good combustion; visible emissions shall not exceed 10% opacity</u>	<u>7 (d)</u>	<u>14 (a)(d)</u>

	<u>Oil</u>	<u>Good combustion of low sulfur oil; visible emissions shall not exceed 10% opacity</u>	<u>combined (c)</u>	<u>15 (d) 15 (b)(d) 22</u>
<u>SO₂</u>	<u>Gas</u>	<u>Good combustion</u>	<u>29 (d)</u>	<u>57 (a)(d)</u>
	<u>Oil</u>	<u>Good combustion of low sulfur fuel oil: max. 0.05% sulfur content, by weight</u>	<u>combined (c)</u>	<u>53 (d) 53 (b)(c) 81</u>
	<u>Oil</u>	<u>Good combustion, limited quantity: max. 0.25% sulfur content, by weight</u>		
<u>H₂SO₄ Mist</u>	<u>Gas</u>	<u>Good combustion</u>	<u>3 (d)</u>	<u>6 (a)(d)</u>
	<u>Oil</u>	<u>Good combustion of low sulfur fuel oil: max. 0.05% sulfur content, by weight</u>	<u>combined (c)</u>	<u>6 (d) 6 (b)(d) 9</u>
	<u>Oil</u>	<u>Good combustion, limited quantity: max. 0.25% sulfur content, by weight</u>		

*These values are calculated using F-factors.

- (a) Based on a maximum of 3900 hours of operation with natural gas firing.
- (b) Based on a maximum of 2000 hours of operation with fuel oil firing.
- (c) Based on 1900 hours natural gas firing and 2000 hours fuel oil firing.
- (d) Compliance shall be demonstrated through fuel sulfur analysis.

7. Visible emissions shall not exceed 10% opacity when firing natural gas or No.2 fuel oil.

8. The potential emissions projected from the DHCT3 are:

ESTIMATED POTENTIAL EMISSIONS

<u>Pollutant</u>	<u>Method of Control</u>	<u>TPY **</u>
<u>CO</u>	<u>Good combustion, proper use of water injection system</u>	<u>95.2</u>
<u>VOC</u>	<u>Good combustion</u>	<u>8.7</u>
<u>Mercury</u>	<u>Natural Gas/No. 2 Fuel Oil</u>	<u>0.001</u>
<u>Pb</u>	<u>Natural Gas/No. 2 Fuel Oil</u>	<u>0.0638</u>
<u>Be</u>	<u>Natural Gas/No. 2 Fuel Oil</u>	<u>0.00033</u>

**TPY values are for annual operation reports (AOR) and PSD applicability determinations. These values are based on the DHCT3 operating at full load at ISO for a total of 3900 hours per year, with up to 2000 hours of No.2 fuel oil-fired operation.

Compliance Determination

9. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate at which this unit will be operated, but not later than 180 days of initial operation at the maximum capability of the unit and annually thereafter, by using the following reference methods as described in 40 CFR 60, Appendix A (1993 version), and adopted by reference in Chapter 62-297, F.A.C.

Initial (I) compliance tests shall be performed on the DHCT3 while firing each fuel (gas, oil). Annual (A) compliance tests shall be performed during every federal

fiscal year (October 1 - September 30) pursuant to Rule 62-297.340, F.A.C., on the DHCT3 with the fuel(s) used for more than 400 hours in the preceding 12-month period.

- Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources (I,A)
- Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources (I)
- Method 20 Determination of Nitrogen Oxides and Diluent Emissions from Stationary Gas Turbines (I,A)

Note: No other methods may be used for compliance testing unless prior DEP approval is received in writing. The DEP may request a special compliance test pursuant to Rule 62-297.340(2), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

10. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the exclusive use of fuel oil with a maximum sulfur content limit of 0.05% or less, by weight, is the method for determining compliance for 502, H₂SO₄ mist, and PM₁₀. There is no suitable method for the testing of PM₁₀ from this type of emissions unit, and the 502 and H₂SO₄ emissions are clearly limited by the sulfur content of the fuel. Compliance with the 502 and sulfuric acid mist emission limits shall be determined by fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel. Alternatively, natural gas supplier data for sulfur content may be submitted. However, the applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. Analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e) (1993 version).

11. Pursuant to Rule 62-212.410, F.A.C., the permittee shall install a dry low-NOx combustor on the DHCT3 for NOx control when firing natural gas. Control of NOx when firing No. 2 fuel oil shall be accomplished by water injection.

12. An initial test for CO, concurrent with each NOx test, is required to confirm that annual potential emissions will not exceed 100 TPY. The NOx and initial CO test results shall be the average of three valid one-hour runs. The DEP's Northeast District office shall be notified, in writing, at least 30 days prior to the initial compliance tests and at least 15 days before annual compliance test(s). The combustion turbine shall operate between 95% and 100% of maximum capacity for the ambient conditions experienced during compliance test(s). The turbine manufacturer's heat input rates (based on the high heating value of the fuel) vs. ambient temperature curve shall be included with the compliance test results. The fuel feed rates and the high heating value of the fuels shall be established during the initial and annual compliance tests. Compliance test results shall be submitted to the DEP's Northeast District office no later than 45 days after completion of the last test run.

13. Excess NOx emissions from this turbine resulting from startup, shutdown, malfunction, fuel switching or load change, shall be acceptable providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the DEP's Bureau of Air Regulation or the Northeast District office for a longer duration. Best operating practices shall be documented in writing and a copy submitted to the DEP's Northeast District office along with the initial compliance test data. The document may be updated as needed with all updates submitted to the DEP's Northeast District office within thirty (30) days of implementation and shall include time limitations on excess emissions caused by turbine startup.

Notification, Reporting and Recordkeeping

14. Notification and recordkeeping shall be in accordance with 40 CFR 60.7 (1993 version). The following protocols shall be submitted to the DEP's Northeast District office for approval:

a. CEMS - If applicable, the Federal Acid Rain Program requirements of 40 CFR 75 shall apply when those requirements become effective in Florida.

b. Performance Test Protocol - At least 30 days prior to conducting the initial performance tests required by this permit, the permittee shall submit to the DEP's Northeast District office for their review and approval: a protocol outlining the procedures to be followed; the test methods; and, any differences between the reference methods and the test methods proposed to be used to verify compliance with the conditions of this permit.

c. All measurements, records, and other data required to be maintained by GRU shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the DEP representatives.

Monitoring Requirements

15. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from this source. One-hour periods when NOx emissions (ppmvd @ 15% oxygen) are above the BACT standards (15/42 gas/oil) shall be reported as excess emissions following the format of 40 CFR 60.7 (1993 version). The continuous emission monitor must comply with Rule 62-297.500, F.A.C.; 40 CFR 60, Appendix F, Quality Assurance Procedures (1993 version) (or other DEP approved QA plan); 40 CFR 60, Appendix B, Performance Specification 2 (1993 version); or, if applicable,

40 CFR 75, Appendix A and Appendix B. Periods of startup, shutdown, fuel switching, malfunction, and load change shall be monitored and recorded. The NOx CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, which are required in accordance with 40 CFR 60, Subpart GG (1993 version), and are used as indicators of compliance with the NOx standard specified in the subpart. Since the NOx emission standard from Subpart GG is more than twice the BACT standard, monitoring for emissions in excess of the BACT limits using the NOx CEMS is more stringent. FBN levels are not required for excess emission reports when excess emissions are reported and based on the stack monitoring system. The calibration of the water/fuel monitoring device required in 40 CFR 60.335(c)(2) (1993 version) will be replaced by certification tests of the NOx CEMS.

16. 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 condition or preventable equipment breakdown shall not be considered malfunctions and shall be prohibited pursuant to Rule 62-210.700, F.A.C.

17. The sulfur content of the fuel oil being fired in the combustion turbine shall be determined in accordance with 40 CFR 60.334(b) (1993 version). Any request for a future custom monitoring schedule shall be made in writing and directed to the DEP's Bureau of Air Regulation office. Any custom schedule approved by the DEP pursuant to 40 CFR 60.334(b) (1993 version) will be recognized as enforceable provisions of the permit, provided that the holder of this permit demonstrates that the provisions of the schedule will be adequate to assure continuous compliance. The records of natural gas and No. 2 fuel oil usage shall be kept by the company for a five-year period for regulatory agency inspection purposes.

Rule Requirements

18. The emission unit shall be in compliance with all applicable provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 210, 212, 275, 296 and 297, F.A.C.

19. The emission unit shall be in compliance with all applicable requirements of 40 CFR 60, Subpart A, Appendix A and Appendix B (1993 version), Subpart GG - Standards of Performance for Stationary Gas Turbines (1993 version), and Rule 62-296.800(2) (a), F.A.C. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s). All notifications and reports required by this specific condition shall be submitted to the DEP's Northeast District office.

20. Issuance of this certification does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (Rule 62-210.300(1), F.A.C.).

21. The emission unit shall be in compliance with all applicable provisions of Rule 62-210.650, F.A.C.: Circumvention; Rule 62-210.700, F.A.C.: Excess Emissions; Rule 62-296.800, F.A.C.: Standards of Performance for New Stationary Sources (NSPS); Chapter 62-297, F.A.C.: Stationary Sources - Emissions Monitoring; and, Rule 62-4.130, F.A.C.: Plant Operation - Problems.

22. If construction does not commence within 18 months of issuance of this certification, the permittee shall obtain from the DEP's Bureau of Air Regulation a review and, if necessary, a modification of the BACT determination and allowable emissions for the unit(s) on which construction has not commenced (40 CFR 52.21(r)(2) (1993 version)).

23. Quarterly excess emission reports, in accordance with 40 CFR 60.7 and 60.334 (1993 version), shall be submitted to the DEP's Northeast District office.

24. Pursuant to Rule 62-210.370(2), F.A.C., Annual Operating Reports, 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 content of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual operating reports shall be sent to the DEP's Northeast District office by March 1st of each calendar year.

25. Stack sampling facilities shall be installed in accordance with Rule 62-297.345, F.A.C.

Modifications

26. The permittee shall give written notification to the DEP when there is any modification to this facility/emission unit pursuant to Rule 62-212.200, F.A.C., Definitions - Modifications. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of the application/request, if necessary. Such notice shall include, but not be limited to: information describing the precise nature of the change; modification(s) to any emission control system; production capacity of the facility/emissions unit before and after the change; and, the anticipated completion date of the change.

27. An application for Title V operation permit must be submitted to the Tallahassee office no later than 180 days after commencing operation. The permittee shall submit a timely and complete permit application in compliance with the requirements of Chapter 62-213.420.

NOTICE OF RIGHTS

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection 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 that the Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 6th day of April, 1995, in Tallahassee, Florida.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52
Florida Statutes, with the designated
Department Clerk, receipt of which
is hereby acknowledged.

Luis A. Littleton 4/06/95
Clerk Date

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing was sent by
U.S. Mail to the following this 7th day of April, 1995.

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