

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. PSD-FL-212
Alachua County

Mr. Michael L. Kurtz
General Manager for Utilities
Gainesville Region Utilities
Post Office Box 147117-Station A-134
Gainesville, Florida 32614-7117

Enclosed is Permit Number PSD-FL-212. This permit authorizes the construction of a 74 MW simple cycle combustion turbine (SCCT) in Gainesville, Alachua County, Florida, 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 14 days from the date this Notice is filed with the Clerk of the Department.

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, 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 4-11-95 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.


(Clerk)

4-11-95
(Date)

Copies furnished to:
C. Kirts, NE District
D. Roberts, HGS&S
J. Harper, EPA
J. Bunyak, NPS
B. Oven, PPS, DEP
D. Graziani, P.E., FWI

PERMITTEE:

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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, F.S. 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), F.S., 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 F.S. 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.
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

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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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S. 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 F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-30.300, F.A.C., as applicable.

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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;
 - 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

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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:

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 in writing and/or on an application to the DEP's Bureau of Air Regulation office and Northeast District office.

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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 load change and fuel switching 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>
NO _x *	Gas	15 ppmvd @ 15% Oxygen	58	113(a)
	Oil	42 ppmvd @ 15% Oxygen	184	184(b)
			Combined(c)	239
PM ₁₀	Gas	Good combustion; visible emissions shall not exceed 10% opacity	7(d)	14(a)(d)
	Oil	Good combustion of low sulfur oil; visible emissions shall not to exceed 10% opacity	15(d)	15(b)(d)
			Combined(c)	22
SO ₂	Gas	Good combustion	29(d)	57(a)(d)
	Oil	Good combustion of low sulfur fuel oil: max. 0.05% sulfur content, by weight	53(d)	53(b)(d)
			Combined(c)	81
	Oil	Good combustion, limited quantity: max. 0.25% sulfur content, by weight		
H ₂ SO ₄ Mist	Gas	Good combustion	3(d)	6(a)(d)
	Oil	Good combustion of low sulfur fuel oil: max. 0.05% sulfur content, by weight	6(d)	6(b)(d)
			Combined(c)	9
	Oil	Good combustion, limited quantity: max. 0.25% sulfur content, by weight		

*These values will be 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 of operation with fuel oil firing.

(d) Compliance shall be demonstrated through fuel sulfur analysis.

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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>
CO	Good combustion, proper use of water injection system	95.4
VOC	Good combustion	8.66
Inorganic Arsenic	Natural Gas/No. 2 Fuel Oil	0.004854
Mercury	Natural Gas/No. 2 Fuel Oil	0.0009
Pb	Natural Gas/No. 2 Fuel Oil	0.05746
Be	Natural Gas/No. 2 Fuel Oil	0.00032

** 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 conditions 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)

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- 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 SO₂, H₂SO₄ mist, and PM₁₀. There is no suitable method for the testing of PM₁₀ from this type of emissions unit, and the SO₂ and H₂SO₄ emissions are clearly limited by the sulfur content of the fuel. Compliance with the SO₂ 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 and fuel oil 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-NO_x combustor on the DHCT3 for NO_x control when firing natural gas. Control of NO_x when firing No. 2 fuel oil shall be accomplished by water injection.

12. An initial test for CO, concurrent with each NO_x test, is required to confirm that annual potential emissions will not exceed 100 TPY. The NO_x 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). Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air

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temperature during the test (with 100 percent represented by a curve depicting heat input v. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case subsequent operation is limited by adjusting the entire heat input v. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. 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 NO_x 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.

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- 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 NO_x 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 62-297.520, 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 NO_x 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 NO_x standard specified in the subpart. Since the NO_x emission standard from Subpart GG is more than twice the BACT standard, monitoring for emissions in excess of the BACT limits using the NO_x 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 NO_x 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 schedule shall be made in writing and directed to the EPA's office in Atlanta and the DEP's Bureau of Air Regulation office. Any custom schedule approved by EPA and DEP pursuant to 40 CFR 60.334 (b) (1993 version) will be recognized as enforceable provisions of the

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permit. The records of natural gas and No. 2 fuel oil usage shall be kept by the company for a five (5) years period for regulatory agency inspection purposes.

Rule Requirements

18. The emission unit shall be in compliance with all applicable provisions of Chapter 403, F.S., and Chapters 62-4, 210, 212, 275, 296 and 297, F.A.C., except as otherwise specified herein.

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., except as otherwise specified herein. 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 permit 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. Except as otherwise specified herein, 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 permit, 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:

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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.

26. 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 (Rule 62-4.090, F.A.C.).

27. An application for a 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 Rule 62-213.420, F.A.C. To properly apply for an operation permit, the permittee 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 (Rules 62-4.055 and 62-4.220, F.A.C.).

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION**


Virginia B. Wetherell
Secretary