

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

October 26, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. William Herrington
Orlando Utilities Commission
500 South Orange Avenue
Orlando, Florida 32802

Dear Mr. Herrington:

Re: Permit Modification for Indian River Plant Gas Turbines
Numbers: AC 05-144482, -146749, -146750, and -146751

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for OUC's gas turbine project at the Indian River Plant in Brevard County, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Regulation.

Sincerely,


C. H. Fancy, P.E.
Bureau of Air Regulation

CHF/pr

Attachments

cc: C. Collins, C District
W. Aronson, EPA
C. Shaver, NPS
J. Crall, OUC
S. Day, Black & Veatch

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the RETURN TO. Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check boxes for additional service(s) requested.

1. Show to Whom Delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

3. Article Addressed to:
 Mr. William Herrington
 Orlando Utilities Commission
 500 South Orange Avenue
 Orlando, Florida 32802

4. Article Number
 P 065 251 056

Type of Service:
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature Address
 X

6. Signature
 X *W. Herrington*

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar 1988 U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 065 251 056
 RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

Sent to
 Mr. William Herrington, OUC

Street and No.
 500 South Orange Avenue

P.O. State and ZIP Code
 Orlando, FL 32802

Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date and Address of Delivery	
TOTAL Postage and Fees	\$

Postmark or Date

Permit: AC 05-15582, -146750
 PSD-FL-130 -146749, -51
 Mailed: 10-27-89

PS Form 3800, June 1985

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Orlando Utilities Commission DER File Nos. AC 05-144482
500 South Orange Avenue AC 05-146749
Orlando, FL 32802 AC 05-146750
 AC 05-146751
 PSD-FL-130

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (copy attached) for the project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Orlando Utilities Commission, applied on August 31, 1989, to the Department of Environmental Regulation for a modification of the construction permit for the gas turbine project at the Indian River Plant located in Brevard County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applicant have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person

has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E.
Bureau of Air Regulation

Copies furnished to:

C. Collins, C District
W. Aronson, EPA
C. Shaver, NPS
J. Crall, OUC
S. Day, Black & Veatch

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 10/27/09.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

Kim Jabun
Clerk

10/27/09
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue modified permits to Orlando Utilities Commission, 500 South Orange Avenue, Orlando, Florida, 32802, for the gas turbine project at the Indian River Plant in Brevard County, Florida. A revision of Best Available Control Technology (BACT) was not required. The revised maximum degree of Class II TSP increment consumed is 25% (3-hr) and 1% (annual). The maximum combined pollutant concentrations from the turbines and other sources in the area will be less than the National Ambient Air Quality Standards (NAAQS). The NAAQS are levels set by the EPA which identify the ambient concentration necessary to protect human health and welfare with an adequate margin of safety. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation
Central District Office
3319 Maguire Blvd, Suite 232
Orlando, Florida 32803-3767

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination. Furthermore, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

Orlando Utilities Commission
Indian River Plant
Titusville, Brevard County, Florida

Combustion Turbine Facility

CT-A, AC 05-144482
CT-B, AC 05-146749
CT-C, AC 05-146750
CT-D, AC 05-146751

PSD-FL-130

Florida Department of Environmental Regulation
Bureau of Air Regulation

October 26, 1989

Technical Evaluation

The Department received a permit modification request dated August 31, 1989, for a revision of the particulate matter (PM) emission limit for the above project.

DER had required initial tests to verify the vendor's projected PM emissions rate, and the permitted rate, of 10 lb/hr for each turbine. Results from initial performance tests on the two turbines installed, out of the four proposed at the Indian River Plant, indicate PM emissions in excess of the permit limit of 10 lbs/hr when burning fuel oil. CT-A (Combustion Turbine-A) averaged 15.3 lbs/hr while CT-B averaged 21.9 lbs/hr. The data submitted by GE since then explained how the earlier emission estimates had not accounted for water injection, a NOx control measure for the turbines. GE has revised their earlier estimates of 10 lb/hr to 17 lb/hr. This revised estimate is based on the performance of the turbines operated using water injection.

The increase in the PM emissions requires a reevaluation of the project for changes in source operation, rule applicability, emission limitations, BACT, and ambient air impacts.

The Department has determined that the revised emissions do not significantly alter any of the aspects of the earlier project review. DER will revise the PM emission limitations to 20 lb/hr considering GE's data and anticipating a certain amount of operation variation. The PM limit proposed by OUC of 30 lb/hr is not justified. Furthermore, it should be noted that the turbines were tested at close to the diverging section of the stack, and not in strict accordance with the probe location requirements in Chapter 17-2 of the Florida Administrative Code. It is projected that had the probe location been proper the PM would have been somewhat lower.

The PM ambient air impacts estimated in the Preliminary Determination dated July 15, 1988, will change based on a revised emissions limit of 20 lbs/hr as follows:

	<u>Previously Predicted</u> <u>Impact (ug/m³)</u>	<u>Revised Predicted</u> <u>Impact (ug/m³)</u>
PM 24 hour	0.4	0.8
Annual	< 0.1	< 0.2

Note: The PM Deminimus Ambient Impact Level is 10 ug/m³ (24-hr).
The PSD Significant Impact Level is 5 ug/m³ (24-hr) and
1 ug/m³ (annual).

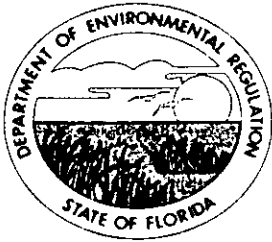
The calculations which have been submitted by the permittee on September 18, 1989, quantifying the effects of the location of the sampling point on PM emissions, are accepted as additional information only. These calculations have not been evaluated, certainly not endorsed or validated in any manner by the Department. The BACT determination will remain unchanged, requiring the use of low sulfur fuel.

Since DER's intent in requiring the PM test has been served (obtaining representative emissions), the permits will be modified to no longer require testing for PM. The PM emission information will be noted in the permits for PSD and inventory purposes.

Conclusion

Based on the information provided by OUC, the Department has reasonable assurance that the revision of the PM emissions from the gas turbine project at the Indian River Plant, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

John Thomas
10/26/89



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:
Orlando Utilities Commission
500 S. Orange Avenue
Orlando, Florida 32802

Permit Numbers: AC 05-144482
05-146749
05-146750
05-146751
PSD-FL-130

Expiration Date: Jan. 31, 1992
County: Brevard
Latitude/Longitude: 28°29'32"N
80°46'59"W

Project: Combustion Turbines,
CT-A, CT-B, CT-C, and CT-D.

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 drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of four simple cycle GE Frame 6 combustion turbines, each with about 35 MW capacity, at the existing Indian River Plant, Brevard County, Florida. The turbines will primarily fire natural gas. Distillate oil will be fired during periods of curtailed or uneconomical natural gas supply. Nitrogen oxide emissions will be controlled by water injection.

The source 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. OUC's application package dated January 18, 1988.
2. DER's letter concerning application fees dated February 15, 1988.
3. DER's letter for additional information dated March 10, 1988.
4. DER's letter containing EPA's comments dated March 18, 1988.
5. OUC's letter received April 18, 1988.
6. Black & Veatch (B&V) letter received May 5, 1988.
7. OUC's letter received May 13, 1988.
8. B & V's letter received May 18, 1988.

PERMITTEE:
Orlando Utilities Commission

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Attachments Continued:

9. B & V's letter received June 13, 1988.
10. B & V's letter received June 16, 1988.
11. B & V's letter received June 21, 1988.
12. Fish & Wildlife Service letter received July 5, 1988.
13. OUC's comments received August 18, 1988.
14. Preliminary and Final Determinations dated July 15 and August 26, 1988, respectively.
15. OUC's letter received February 27, 1989.
16. DER's letter dated March 8, 1989.
17. OUC's letter received September 5, 1989.
18. DER's Preliminary Determination dated October 26, 1989.

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 Trust Fund may express State opinion as to title.

PERMITTEE:
Orlando Utilities Commission

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GENERAL CONDITIONS:

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.

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 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.

PERMITTEE:
Orlando Utilities Commission

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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 proscribed 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

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:
Orlando Utilities Commission

Permit Nos. AC 05-144482
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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:

1. These permits replace the previous permits issued with the same numbers on August 26, 1988. Upon issuance of these permits, the previous permits will be void.
2. Each turbine may operate continuously (8,760 hrs/year).
3. Only natural gas or distillate oil shall be fired in the turbine.
4. The maximum heat input to each turbine shall not exceed 445 MMBtu/hr, at sea level and 59°F (see Attachment 13 for a plot of heat input vs. temperature).

PERMITTEE:
Orlando Utilities Commission

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SPECIFIC CONDITIONS:

5. The maximum allowable emissions from the turbine(s) in accordance with the BACT determination, shall not exceed the following, at sea level and 59°F:

Pollutant	Fuel	lb/hr/unit	TPY/unit	TPY/4 units
NOx	Gas	75.1	328.9	1316
	Oil	118.3	518.2	2073
SO ₂	Gas	0.34	1.5	6
	Oil	142.7	625.0	2500

6. Visible emissions shall not exceed 5% opacity while burning natural gas or 10% opacity while burning distillate oil.

7. The following emissions are tabulated for PSD and inventory purposes:

Pollutant	Fuel	Emissions		
		lbs/hr/unit	TPY/unit	TPY 4 units
Carbon Monoxide	Gas	10.0	43.8	175
	Oil	10.0	44.2	177
Total Particulates	Gas	2.5	11.0	44
	Oil	10.0	43.8	175
PM ₁₀	Gas	2.5	11.0	44
	Oil	10.0	43.8	175
VOC	Gas	4.0	17.5	70
	Oil	4.0	17.5	70
Sulfuric Acid Mist	Oil	10.0	44.0	176
Beryllium	Oil	0.0001	0.0005	0.0018

8. The distillate oil sulfur content shall not exceed 0.3% by weight.

9. Water injection shall be utilized for NOx control. The water to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be monitored.

10. Both start and black start capability shall be provided by a No. 2 fuel oil fired 800 HP internal combustion diesel (for each turbine), projected to run for approximately 10 minutes per start. These diesels are expected to emit minimal air emissions (15 lbs SO₂/yr/unit).

11. Initial (I) compliance tests shall be performed using both fuels. Annual (A) compliance tests shall be performed with the fuel(s) used for more than 170 hours in the preceding 12 month period. Tests shall be conducted using EPA methods in accordance with the July 1, 1987 version of 40 CFR 60 Appendix A:

PERMITTEE:
Orlando Utilities Commission

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SPECIFIC CONDITIONS:

- a. 20 for NO_x (I,A)
- b. ASTM D 2880-71 for sulfur content of distillate oil, and ASTM D 1072-80, D 3031-81, D 4084-82 or D 3246-81 for sulfur content of natural gas (I, and A if deemed necessary by DER)
- c. 10 for CO (I)
- d. 9 for VE (I,A)
- e. 104 for Beryllium (I, for distillate oil only) A fuel analysis for Be using either Method 7090 or 7091, and sample extraction using Method 3040, as described in the EPA solid waste regulations SW 846, is also acceptable.

Tests for Be and SO₂ are to be conducted for oil only. Compliance with SO₂ limits may be demonstrated by testing all oil shipments for sulfur content less than 0.30 percent using ASTM D 2880-71.

Any unit which has accumulated 170 hours burning fuel oil during the preceding 12 month period shall conduct an annual test using fuel oil.

Other DER approved methods may be used for compliance testing after prior Departmental approval.

12. The project shall comply with all the applicable requirements of Chapter 17-2, Florida Administrative Code and the July 1, 1987 version of 40 CFR 60 Subpart GG, Gas Turbines.

13. DER's Central District office shall be notified in writing a minimum of 15 days prior to source testing. Written reports of the tests shall be submitted to the Central District office within 30 days of test completion.

14. Any change in the method of operation, fuels, equipment or operating hours shall be submitted for approval to the Central District office.

15. If construction does not commence on all four units within 18 months of issuance of this permit, then the permittee shall obtain from DER a review and, if necessary, a modification of the control technology and allowable emissions for the unit(s) on which construction has not commenced (40 CFR 52.21(r)(2)). The proposed schedule indicates construction commencement dates of October 1988 for units 1 and 2, and November 1989 for units 3 and 4.

PERMITTEE:
Orlando Utilities Commission

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SPECIFIC CONDITIONS:

16. 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. 17-4.090).

17. 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 or within 45 days after completion of compliance testing, whichever occurs first. 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. 17-4.220).

Issued this _____ day
of _____, 1989

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION**

Dale Twachtmann, Secretary

Attachment 13

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:

:

:

,



file copy

ORLANDO UTILITIES COMMISSION

500 SOUTH ORANGE AVENUE • P. O. BOX 3193 • ORLANDO, FLORIDA 32802 • 305/423-9100
CERTIFIED RETURN RECEIPT REQUESTED

August 17, 1988

Florida Department of
Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400
ATTN: Mr. Bill Thomas

RECEIVED

AUG 22 1988

DER-BAQM

Dear Mr. Thomas:

We appreciate your continuing efforts in the processing of our PSD permit application for the four unit combustion turbine project at the Indian River Plant, Brevard County, Florida.

We would like to present the following comments on four of the specific conditions contained in the proposed permit attached to your letter of July 18.

Specific Condition 3 incorrectly specifies the maximum heat input. Each turbine is baseload rated at 445 Million BTU/hr (not 112) on oil at sea level and 59° F as specified in Section III E of the application. As you are aware, the ambient temperature affects the capacity of combustion turbines with lower temperatures serving to increase their maximum heat input firing rate. The amount of water required for NO_x control also affects turbine performance. The enclosed two figures of heat input vs. temperature provide the range of heat input values expected for the GE frame 6 turbine for oil and natural gas. The center line on each figure is the rated baseload curve with maximum water injection. The top line represents the peak load values which could be sustained for only short periods of time without extensive maintenance. This line has also been adjusted to represent the higher heating value of the fuel (HHV). The bottom line represents the baseload condition with no water injection and is adjusted to represent the lower heating value of the fuel (LHV). Thus the figures provide the "normal" maximum capability vs. temperature and the range around that value. Based on the preceding discussion, Condition 3 should read, "The maximum heat input to each turbine shall not exceed the maximum values in the attached Figures of Heat Input vs. Temperature for the OUC Indian River Combustion Turbines." OUC is also providing copies of various GE correction charts and letter of expected performance which were used to develop the two Figures.

Specific condition 12 is currently incorrect as written since the proposed Unit 3 commence construction date is within 18 months of

the permit issuance date. We are hereby notifying you our intent to change the proposed commence construction date of Unit 4 from November 1990 to November 1989 so that it too will fall within 18 months of the permit issuance date. Our proposed new specific condition 12 would read "If construction does not commence on any of the four units within 18 months of the date of this permit issuance, then the permittee shall obtain from the Department a review and, if necessary, a modification of the control technology and allowable emission limits for any such unit. The proposed schedule indicates construction commencement dates of October 1988 for Units 1 & 2, and November 1989 for Units 3 & 4."

We are concerned that Specific Condition 2 could be read to imply a limitation with regard to the combustion of oil. This would be inconsistent with the permit application and the Department's BACT analysis. We have been assured by DER staff that this is not the Department's intent. Rather, the intent was to include in the permit the Department's preference that natural gas be burned if available. We are suggesting that the second sentence in Specific Condition 2 be moved to the second paragraph of the permit on page one following the second sentence in the paragraph to read "Natural gas is the expected primary fuel with distillate oil to be used if the units are needed during periods of curtailed or uneconomical natural gas supply."

Specific Condition B specifies the initial and annual compliance tests to be conducted. We would like to see the requirement to test annually on oil be limited to any unit burning fuel oil more than 170 hours in the preceding 12 month period. It would require 170 hours/year of operation on oil to create 40 tons of NO_x from oil combustion. This would allow OUC to avoid firing the units on oil to do testing when the units have been used only slightly on oil. For item (a), under Specific Condition 12, we agree with the use of EPA test method 20 for NO_x. For SO₂, we propose testing all oil shipments using ASTM D2880-71 for sulfur content less than 0.30 percent as a demonstration of compliance rather than stack testing. We propose that no SO₂ testing be conducted for natural gas because of the very low emission rates. For item (c) we propose testing for particulate matter on oil only since particulate emissions from the combustion of natural gas are also minimal.

We appreciate your attention to these matters.

Sincerely,



J.S. Crall
Director
Environmental Division

JSC:sp

Enclosure

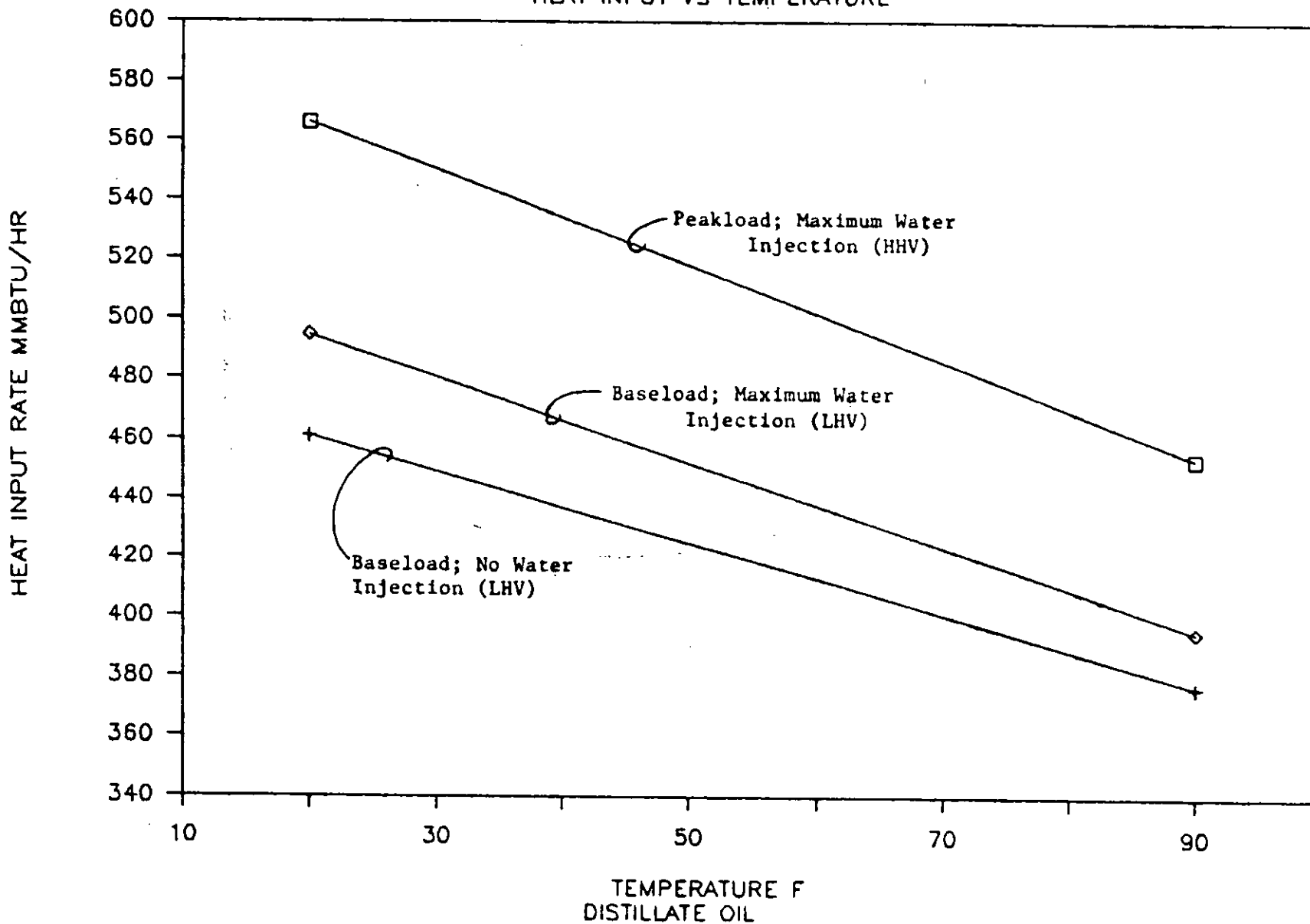
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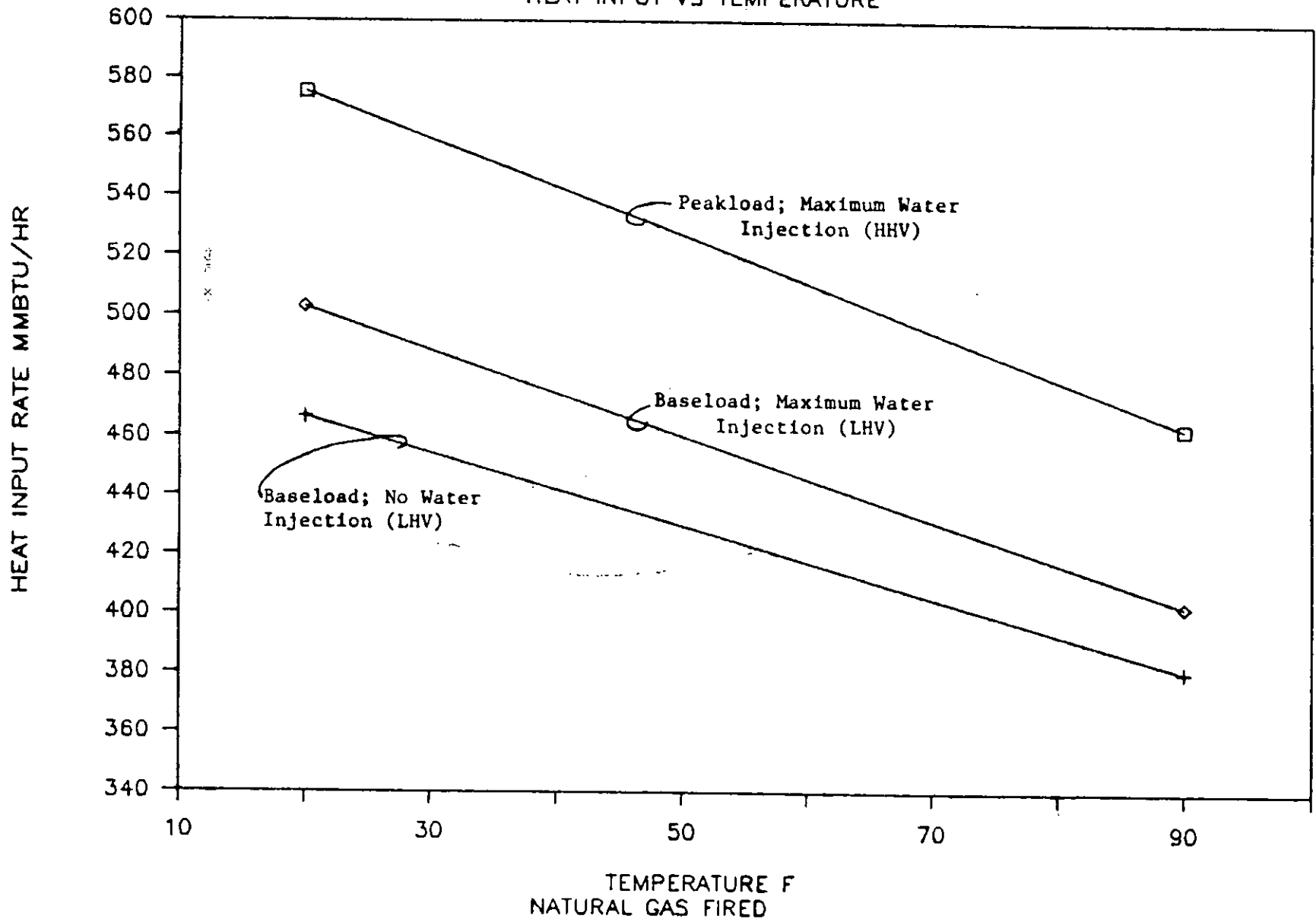
OUC IRP COMBUSTION TURBINES

HEAT INPUT VS TEMPERATURE



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HEAT INPUT VS TEMPERATURE



Other Attachments Available Upon Request