



Lawton Chiles  
Governor

# Florida Department of Environmental Protection

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

Virginia B. Wetherell  
Secretary

May 10, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. G. A. DeMuth, Director  
Environmental Division  
Orlando Utilities Commission  
P. O. Box 3193  
Orlando, Florida 32802

RE: Orlando Utilities Commission Brevard County  
AC05-193720

The Department received your letter dated April 1, 1994, requesting amendments to the above mentioned permit. It should be noted that the majority of these proposed changes will take place in the operating permit itself. After a review of this permit file, the Bureau of Air Regulation is willing to amend and clarify this construction permit with your proposed wording as long as there is not an increase of emissions. The Department has the following responses to your request:

Specific Condition No. 1

**FROM:**

The maximum allowable emissions from this facility shall not exceed the emissions rates listed in the attached Table I.

**TO:**

The maximum allowable emissions from this facility shall not exceed the emissions rates listed in the attached Table I, **dated May 4, 1994.**

Specific Condition No. 2

**FROM:**

Unless the Department has determined other concentrations are required to protect public health and safety, predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:

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Specific Condition No. 2 (Cont'd)

<u>Pollutant</u>	<u>Acceptable Ambient Concentrations ug/m<sup>3</sup></u>		
	<u>8-hr</u>	<u>24-hr</u>	<u>Annual</u>
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Inorganic Mercury Compounds all forms of Vapor, as Hg	NA	NA	0.3

TO: [Note: This condition will be deleted.]

Specific Condition No. 3

**FROM:**

Visible emissions shall not exceed 20 percent opacity at anytime nor exceed 10% during full load.

**TO:**

Visible emissions shall **never** exceed 20 percent opacity **and shall not exceed 10% during full load except as provided in Rule 17-210.700.**

Specific Condition No. 7

**FROM:**

Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation and Central District offices.

**TO:**

Any **request to any change in the method of operation, equipment or operating hours which would result in an increase in emissions shall be submitted to the DEP's Bureau of Air Regulation and Central District offices for prior approval.**

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Specific Condition No. 8

**FROM:**

Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

**TO:**

Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

[**Note:** This condition will not be changed in the construction permit. The District shall include in the operating permit the parameters (i.e. fuel flow rates, water to fuel ratio and heat input, etc.) needed to comply with this condition.]

Specific Condition No. 10

**FROM:**

An initial compliance test shall be performed using both fuels. Annual NO<sub>x</sub> compliance tests shall be performed with the fuel used for more than 400 hours in the proceeding 12 month period.

**TO:**

An initial compliance test shall be performed using both fuels. Annual NO<sub>x</sub> compliance tests shall be performed with **each** fuel used for more than 400 hours **per unit** in the proceeding 12 month period.

Specific Condition No. 11

**FROM:**

Compliance with the SO<sub>2</sub> emission limit can also be determined by calculations based on fuel analysis using ASTM D2880-71 for the sulfur content of liquid fuels.

**TO:**

Compliance with the SO<sub>2</sub> emission limit **can** be determined by calculations based on fuel analysis using ASTM Method ASTM D2880-71 for the sulfur content of liquid fuels.

Mr. G. A. DeMuth  
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Specific Condition No. 14

**FROM:**

Test results will be the average of 3 valid runs. The Central District office will be notified at least 30 days in advance of the compliance test. The source shall operate between 90 percent and 100 percent of permitted capacity during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

**TO:**

Test results will be the average of **three** valid **one-hour** runs. The Central District office will be notified at least 30 days in advance of the compliance test. The source shall operate between 90 percent and 100 percent of permitted capacity during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

[**Note:** This condition will not be changed. The 30 days advance notice is specified in 40 CFR 60.8(d). The District office will incorporate the Division Director's memo regarding compliance for combustion turbines in the operating permit, as soon as it becomes available. The **15 days** notice requirement will apply to subsequent annual tests.]

Specific Condition No. 15

**FROM:**

Water injection shall be utilized for NO<sub>x</sub> control. The water to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be continuously monitored.

**TO:**

Water injection shall be utilized for NO<sub>x</sub> control. The water to fuel ratio at which **annual** compliance is achieved shall be incorporated into the permit and shall be continuously monitored. **The system shall meet the requirements of 40 CFR Part 60, Subpart GG.**

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Specific Condition No. 16

**FROM:**

To determine compliance with the capacity factor limitations each CT's fuel consumption shall be continuously measured and recorded. The permittee shall maintain daily records of this fuel usage. All records shall be maintained for a minimum of three years after the date of each record and shall be made available to representatives of the Department upon request.

**TO:**

To determine compliance with the capacity factor limitations each CT's fuel consumption shall be continuously measured and recorded. The permittee shall maintain daily records of this fuel usage. All records shall be maintained for a minimum of **two** years after the date of each record and shall be made available to **authorized** representatives of the Department upon request.

Specific Condition No. 17

**FROM:**

Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment. These records shall also be kept by the company for at least three years and made available for regulatory agency's inspection.

**TO:**

Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment **as required in 40 CFR 60 Subpart GG**. These records shall also be kept by the company for at least **two** years and **shall be** made available for inspection by **authorized representatives of the Department**.

Specific Condition No. 18

**FROM:**

Compliance with the acceptable ambient concentrations for Be, Lead, and Hg emisissions shall be demonstrated based on calculations certified by a Professional Engineer registered in Florida, using

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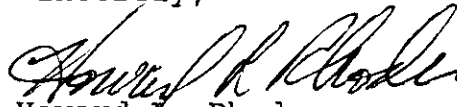
Specific Condition No. 18 (Cont'd)

actual operating conditions. Determination of the ambient concentrations for chemical compounds shall be determined by Department approved dispersion modeling. This compliance determination shall be made available upon request.

TO:

[Note: This condition will be deleted. The compliance determination has been submitted to the Department.]

Sincerely,



Howard L. Rhodes  
Director  
Division of Air Resources  
Management

HLR/TH/bjb

Attachment to be Incorporated: Mr. Greg Demuth's letter of 4/1/94.

cc: Chuck Collins, CD  
Bob Hicks, OUC

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this AMENDMENT and all copies were mailed by certified mail before the close of business on 5/24/94 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.

Barbara J. Fontwell 5/24/94  
Clerk Date

**RECEIVED**

MAY 31 1994

Bureau of

Air Regulation

P 872 562 702

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mail piece, or back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1.  Addressee's Address

2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: Mr. G. A. DeMuth  
Environmental Division  
Orlando Utilities Commission  
P. O. Box 3193  
Orlando, Florida 32802

4a. Article Number: P 872 562 702

4b. Service Type

Registered  Insured

Certified  COGNADO

Express Mail  Return Receipt Merchandise

7. Date of Delivery

8. Addressee's Address (Only if restricted and fee is paid)

5. Signature (Addressee)

6. Signature (Agent)

PS Form 3811, December 1991 U.S. GPO: 1992-323-402

P 872 562 702



**Receipt for Certified Mail**

No Insurance Coverage Provided  
Do not use for International Mail  
(See Reverse)

Sent to	
Mr. G. A. DeMuth	
Street and No.	
P. O. Box 3193	
P.O., State and ZIP Code	
Orlando, Florida 32802	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
Mailed: 5/24/94	
AC 05-193720; PSD-FL-173	

PS Form 3800, JUNE 1991

FROM:

TABLE 1  
ALLOWABLE EMISSION LIMITS  
Simple Cycle Combustion Turbine

Pollutant	Standards		Gas Turbine Tons Per Year*		Basis
	Gas Firing/20 F	No. 2 Fuel Oil Firing/20 F	Gas	Oil	
	NO <sub>x</sub>	25 ppm at 15% oxygen on a dry basis	42 ppmv at 15 percent oxygen on a dry basis	591.5	
SO <sub>2</sub>	Natural gas as fuel	0.3 percent S by weight	2.1	953	BACT
PM/PM <sub>10</sub>	0.003 lb/MMBtu	0.08 lb/MMBtu	19.5	237	Performance Data
VOC	-	-	37	112	" "
CO	-	-	313	159	" "
Mercury (Hg)	-	3.0 x 10 <sup>-6</sup> lbs/MMBtu	-	0.01	Est. by Appl.
Lead (Pb)	-	2.8 x 10 <sup>-5</sup> lbs/MMBtu	-	0.08	" "
Beryllium (be)	-	2.5 x 10 <sup>-6</sup> lbs/MMBtu	-	0.01	" "
Sulfuric Acid Mist	Natural gas as fuel	Low sulfur content oil	0.07	28.5	" "

\* Emissions rates for both 129 MW turbines are based on a 50 percent capacity factor with a maximum of 25 percent attributed to oil firing.



TO:

TABLE 1  
 ALLOWABLE EMISSION LIMITS  
 Simple Cycle Combustion Turbine

Pollutant	Standards		Gas Turbine Tons Per Year*		Basis
	Gas Firing/20 F	No. 2 Fuel Oil Firing/20 F	Gas	Oil	
NO <sub>x</sub>	25 ppm at 15% oxygen on a dry basis	42 ppmv at 15 percent oxygen on a dry basis	591.5	506	BACT
SO <sub>2</sub>	Natural gas as fuel	0.3 percent S by weight	2.1	953	BACT
PM/PM <sub>10</sub>	0.003 lb/MMBtu	0.08 lb/MMBtu	19.5	237	Performance Data
VOC	-	-	37	112	" "
CO	-	-	313	159	" "
Sulfuric Acid Mist	Natural gas as fuel	Low sulfur content oil	0.07	28.5	" "

\* Emissions rates for both 129 MW turbines are based on a 50 percent capacity factor with a maximum of 25 percent attributed to oil firing.


Since the pollutants Mercury (Hg), Lead (Pb), Beryllium (Be) are an inherent constituent in distillate fuel oil, they will be regulated by specifying that only No. 2 fuel oil be fired at this facility in addition to natural gas.

Revised 5/4/94

Memorandum

Florida Department of  
Environmental Protection

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TO: Howard Rhodes  
FROM: Clair Fancy   
DATE: May 9, 1994  
SUBJECT: Orlando Utilities Commission (OUC)  
AC 05-193720; PSD-FL-173A

Orlando Utilities Commission requested that the referenced permit be amended to clarify some of the wording of the specific conditions. The amendment will not allow an increase in permitted annual emissions of any pollutant.

The Bureau recommends your approval.

CHF/TH/bjb

Attachment