

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

In the matter of an  
Application for Permit by:

DER File No. AC49-205703  
PSD-FL-182

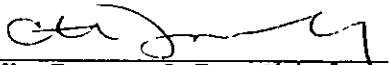
Mr. A. K. Sharmer  
Director of Power Supply  
Kissimmee Utility Authority  
1701 West Carroll Street  
Kissimmee, Florida 34741

Enclosed is Permit Number AC49-205703 to construct a 40 MW simple cycle combustion turbine (SCCT) and a 120 MW combined cycle combustion turbine (CCCT). The combustion turbines will have the capability to fire either natural gas or No. 2 fuel oil. Water injection or low NOx combustors will be used to control nitrogen oxides (NOx) emissions and low sulfur fuel (0.5% S) will be fired to control sulfur dioxide (SO<sub>2</sub>) emissions. The CCCT will intermittently operate in a simple cycle when the HRSG or steam turbine is down for maintenance and/or repair. These two combustion gas turbines are located in Kissimmee, Osceola County, Florida.

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 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
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 4-9-93 to the listed persons.

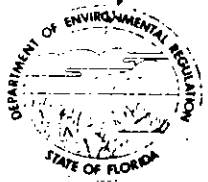
Clerk Stamp

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) 4-9-93  
(Date)

Copies furnished to:

Mr. T. A. Kaczmariski, P.E.  
Mr. Chuck Collins, CD  
Ms. Jewell Harper, EPA  
Mr. John Bunyak, NPS



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: <i>Claw</i>	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

RECEIVED

# Interoffice Memorandum

APR 06 1993

D.E.R. OFFICE  
OF THE SECRETARY

TO: Virginia B. Wetherell  
FROM: Howard L. Rhodes *HR*  
DATE: April 1, 1993  
SUBJ: Approval of Construction Permit AC49-205703 (PSD-FL-182)  
Kissimmee Utility Authority

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a 40 MW simple cycle combustion turbine (SCCT) and a 120 MW combined cycle combustion turbine (CCCT).

Kissimmee Utility Authority proposes to operate two combustion gas turbines. The combustion turbines will have the capability to fire either natural gas or No. 2 fuel oil. Water injection or low NO<sub>x</sub> combustors will be used to control nitrogen oxides (NO<sub>x</sub>) emissions and low sulfur fuel (0.05% S) will be fired to control sulfur dioxide (SO<sub>2</sub>) emissions. The CCCT will intermittently operate in a simple cycle when the HRSG or steam turbine is down for maintenance and/or repair.

I recommend your approval and signature.

HLR/TH/plm

Attachments

Final Determination

Kissimmee Utility Authority  
Kissimmee, Osceola County, Florida

40 MW Simple Cycle Combustion Gas Turbine  
120 MW Combined Cycle Combustion Gas Turbine

Permit Number: AC49-205703  
PSD-FL-182

Department of Environmental Regulation  
Division of Air Resources Management  
Bureau of Air Regulation

April 1, 1993

## FINAL DETERMINATION

The Technical Evaluation and Preliminary Determination for the permit to construct a 40 MW simple cycle combustion turbine (SCCT) and a 120 MW combined cycle combustion turbine (CCCT) system facility in Intercession City, Florida, was distributed on November 18, 1992. The Notice of Intent was published in The Orlando Sentinel on December 20, 1992. Copies of the evaluation were available for inspection at the Department's offices in Orlando and Tallahassee.

Kissimmee Utility Authority's (KUA) application for a permit to construct a 40 MW SCCT and a 120 MW CCCT system facility at their Intercession City site has been reviewed by the Bureau of Air Regulation in Tallahassee.

No adverse comments were submitted by the U.S. Environmental Protection Agency (EPA) in their letter dated December 17, 1992, or by the U.S. Department of the Interior in their letters of December 18, 1992, and January 26, 1993.

Comments regarding the Technical Evaluation and Preliminary Determination (Synopsis of Application) and specific conditions of the permit were submitted by Donald D. Shultz of Black & Veatch. The Bureau has considered Mr. Shultz's comments and has agreed to the changes proposed in the material covered by the document entitled "Synopsis of Application" (page 2 through 9) as requested. Regarding the modification of the specific conditions of the permit, these changes, if accepted, will be finalized as follows:

DER PERMIT NUMBER AC49-205703, PSD-FL-182, FOR THE KUA 120 MW COMBINED CYCLE TURBINE AND 40 MW SIMPLE CYCLE TURBINE

### RESPONSE TO COMMENT No. 1

The expiration date will be changed to **March 31, 1995**

### RESPONSE TO COMMENT No. 2, 3, and 4

#### Specific Condition No. 8

Compliance with the NO<sub>x</sub>, SO<sub>2</sub>, CO, PM, PM<sub>10</sub>, and VOC standards shall be determined (while operating at 95-100% of the permitted maximum heat input rate **corresponding to the particular ambient conditions**) within 180 days of initial operation of the maximum capability of the unit and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July 1992 version) and adopted by reference in F.A.C. Rule 17-297.

- Method 1      Sample and Velocity Traverses
- Method 2      Volumetric Flow Rate
- Method 3      Gas Analysis

- Method 5 or Method 17 Determination of Particulate Emissions from Stationary Sources
- Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources
- Method 8 Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources (for fuel oil burning only).
- Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources
- Method 20 Determination of Nitrogen Oxides, Sulfur Dioxide, and Diluent Emissions from Stationary Gas Turbines
- Method 25A Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

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

RESPONSE TO COMMENT No. 5

This condition will not be deleted. The Department is declining this request because natural gas contains varying small amounts of sulfur. Recent applications for similar turbines burning natural gas have shown emissions up to 4 lbs SO<sub>2</sub>/hr. If SO<sub>2</sub> emissions from any of these sources exceed 40 TPY, the project will be retroactively subject to the PSD regulations for this pollutant.

RESPONSE TO COMMENT No. 6

Conditions Nos. 16, 17 and 18 will be combined and reworded as follows:

Specific Condition No. 16

The permittee shall comply with the following requirements:

(a) Install, calibrate, maintain, and operate a continuous emission monitor in each stack to measure and record the nitrogen oxides emissions from each source. The continuous emission monitor must comply with 40 CFR 60, Appendix B, Performance Specification 2 (July 1, 1992); (b) A continuous monitoring system shall be installed to monitor and record the fuel consumption on each unit. While water injection is being 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. The system shall meet the requirements of 40 CFR Part 60, Subpart GG; (c) In addition, literature on equipment selected shall be submitted as it becomes available. A CT-specific graph of the relationship between

NO<sub>x</sub> emissions and water injection and also another of ambient temperature and heat inputs to the CT shall be submitted to DER's Central District office and the Bureau of Air Regulation.

RESPONSE TO COMMENTS ON TABLES 1 and 2, and BACT DETERMINATION

The numerical levels for CO, PM and Be were modified as requested. The BACT emission level for NO<sub>x</sub> will remain as originally set for both turbines (15 ppmvd). However, the wording of some sections of the BACT determination was modified as requested by the applicant.

Because of the uncertainty of time of the NO<sub>x</sub> control technology being achieved for the simple cycle CT, the Department will review this permit annually (after 1/1/95) and will modify its specific conditions to reflect the BACT Determination NO<sub>x</sub> emission level, if appropriate.

In response to comments from the Department of the Interior (Fish and Wildlife Services) Specific Condition No. 15 will be changed as follows:

Specific Condition No. 15

The permittee shall comply with the following by 1/1/98:

- a) For the combined cycle unit (PG7111EA), if the 15 (gas)/42 (oil) ppmv emission rates cannot be met by 1/1/98, SCR will be installed. Hence, the permittee shall install a duct module suitable for future installation of SCR equipment.
- b) For the simple cycle unit (LM6000), the manufacturer will attempt to achieve a maximum NO<sub>x</sub> emission level of 15 (gas)/42 (oil) ppmv by 1/1/98. Should this level of control not be achieved when the compliance demonstration stack tests are performed, the permittee must provide the Department with expected compliance dates which will be updated annually. After 1/1/98, if the compliance schedule has not been met, the Department may require SCR be installed since the exhaust temperature has an acceptable range for SCR installation.

The Department will revise permitted emission levels for NO<sub>x</sub> for both turbines if the manufacturer achieves an even lower NO<sub>x</sub> emission than 15 (gas)/42 (oil) ppmv pursuant to F.A.C. Rule 17-4.080, Modification of Permit Conditions.

The final action of the Department will be to issue construction permit AC49-205703 (PSD-FL-182) with the changes noted above.

P 710 058 555



### Certified Mail Receipt

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

Send to <i>A K Sharnel</i>	
Street & No. <i>Kissimmee U A</i>	
City, State & ZIP Code <i>Kissimmee, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	<i>4-9-93</i>
<i>AC 49-205-703</i>	
<i>PSD-FL-182</i>	

PS Form 3800, June 1990

PS Form 3811, July 1983 447-845

**SENDER: Complete items 1, 2, 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 box(es) for service(s) requested.

- Show to whom, date and address of delivery.
- Restricted Delivery.

3. Article Addressed to:  
*A K Sharnel*  
*Kissimmee Utility Authority*  
*1701 W Carroll St*  
*Kissimmee FL 34741*

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	<i>P 710 058 555</i>

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
*X* *Michelle Rubin*

6. Signature - Agent  
*X*

7. Date of Delivery *4-18*

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

DOMESTIC RETURN RECEIPT