

Department of Environmental Protection

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

David B. Struhs Secretary

December 22, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

A.K. Sharma, Director of Power Supply Kissimmee Utility Authority P.O. Box 423219 Kissimmee, FL 34742-3219

Re:

Request for Additional Information DEP File No. 0970001-003-AC

Project: Add Inlet Air Foggers to Existing Gas Turbine

Dear Mr. Sharma:

On December 6, 1999, the Department received your application and sufficient fee to add inlet air foggers to the existing 49.9 MW combined cycle combustion turbine (Emissions Unit 001) at the Roy B. Hansel Plant. The application is incomplete and additional information is needed in order to continue processing your application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- 1. The application indicates that the combustion turbine is permitted for a maximum heat input of 441.7 mmBTU/hour. A review of our files indicates that the maximum heat input to the combustion turbine is 400 mmBTU/hour and the maximum heat input to the heat recovery steam generator (HRSG) from duct firing is 41.7 mmBTU/hour. Wouldn't the evaporative cooling only result additional heat input from the combustion turbine? Please explain.
- 2. The application includes a performance curve (9/16/80) comparing fuel consumption, power output, and inlet temperature. Is this the original performance curve for the model of gas turbine at the Hansel plant or for a similar unit? The performance curve lists the maximum power for the given unit as 46 MW and not 49.9 MW. Please comment.
- 3. The application included an analysis of the potential increase in actual emissions based on AP-42 emission factors, continuous operation, and 5500 hours of oil firing. The conclusion is that the increased heat input required for inlet fogging (27 mmBTU/hour) would not trigger the PSD significant emissions rates.

The Department has two concerns with this analysis and the request. As the application implies, inlet air fogging provides a benefit only on hot, dry days. A request for continuous inlet fogging appears unrealistic and unnecessary. In addition, the PSD applicability review requires a comparison of past actual emissions with future actual emissions. The analysis presented in the application does not consider the past actual emissions of the gas turbine. A review of the gas turbine operating history based on Annual Operating Reports submitted for the past five years indicates the following:

Unit/Year	Annual Operating Hours 1993 - 1998					
	1994	1995	1996	1997	1998	
Gas Turbine	6695	1158	453	779	1257	

In addition, the reports indicate the majority of operation occurs during the summer months. Based on this review, it appears that this unit has primarily operated as a peaking unit for the last several years. The last two years of operating data indicates an average operation of 1018 hours per year. The attached table summarizes the Department's analysis, which bases past actual emissions on the last 2-years of operation and the emission factors presented in the original application.

Based on the analysis presented, the Department intends to limit inlet air fogging to 1280 hours during any consecutive 12 months of which no more than 1255 hours shall be when firing fuel oil. The intent is to ensure that the fogger project will not increase the utilization of this gas turbine, to prevent the triggering of PSD, and to provide a more realistic scenario of operation. This limit allows fogging for 15% of the permitted operation (8760 hours/year) and more than 100% of the highest actual operation reported during the last four years. Please provide any comments you would like to have considered.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call me at 850/414-7268.

Sincerely,

Jeffery F. Koerner, P.E. New Source Review Section

Jeffens J. Koen

JFK/jfk

cc: Mr. Jerome Guidry, Perigree Technical Services, Inc.

Mr. Len Kozlov, DEP - Central District Office

Mr. Gregg Worley, EPA

Mr. John Bunyak, NPS

SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b. Print your name and address on the reverse of this form so that we card to you. Attach this form to the front of the mailpiece or on the back if spacinermit. Write "Return Receipt Requested" on the mailpiece below the artic. The Return Receipt will show to whom the article was delivered an delivered.	e troes not le numbe:	I also wish to rec following service: extra fee): 1. Addresse 2. Restricte Consult postmas	s (for an ee's Address d Delivery
3. Article Addressed to: IK Sharma KUP PO BOX 423219 Kissing The Line of Strong 5. Received By: (Print Name) SEVA 6. Signatures (Addressed or Agent)	7. Date of D 8. Addresse and fee i	Type red Mail except for Merchandise Delivery 2/2/2/6 ee's Address (Only	Contilled Insured COD
PS Form 3811 , December 1994	02595-98-B-0229	Domestic Ret	urn Receipt

Z 031 391 911

# x 0["]"	S Postal Service Receipt for Certi to Insurance Coverage P to not use for International Service to Number	AMAII (See reverse)				
ļ	ost Office, State, & ZIP Code	ni FI				
	Postage	\$				
	Certified Fee					
	Special Delivery Fee					
	Restricted Delivery Fee					
April 1995	Return Receipt Showing to Whom & Date Delivered					
April	Return Receipt Showing to Whom Date, & Addressee's Address					
3800	TOTAL Postage & Fees	\$				
က္က	Postmark or Date	12-22-99				
Form	0970001-003-AC					
S	1 Toolet Mis Hagers					

Environmental Radiation Studies Environmental Impact Studies Radiation Dose Modeling Risk Assessment



Atmospheric Dispersion Modeling Air Pollution Permitting Landscape Design Graphic Arts

RECEIVED

December 3, 1999

DEC 06 1999

BUREAU OF AIR REGULATION

Mr. A. A. Linero, P. E.
Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re:

Permit Modification Request

Kissimmee Utility Authority

Roy B. Hansel Facility - Permit Number: 0970001-001-AV

Dear Mr. Linero:

0970001-003-AC

I have enclosed four (4) copies of the relevant pages of the Application for Air Permit - Title V Source to modify the above referenced permit to install an inlet fogging system. Please call me at (407) 333-7374 if you have any questions regarding this submittal.

Very truly yours,

PERIGEE TECHNICAL SERVICES, INC.

Jerome J. Guidry, P.E., Q.E.P.

President

JJG:emć

CC:

A. K. Sharma

Jeff Ling

Larry Mattern

Enclosures

via Certified Mail P 076 763 330

CC: J. Koerner