



CALPINE

ISLAND CENTER  
2701 N. ROCKY POINT DRIVE  
SUITE 1200  
TAMPA, FLORIDA 33607  
813.637.7300  
813.637.7399 (FAX)

RECEIVED

OCT 05 2001

October 3, 2001

BUREAU OF AIR REGULATION

Mr. A. A. Linero  
Florida Department of Environmental Protection  
Bureau of Air Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: Auburndale Power Partners, L.P.  
Construction of Wet Compression Addition

Dear Mr. Linero:

Auburndale Power Partners, L.P. has completed successful testing of a new system for upgrade to the combustion turbine, emissions source A-001. These tests involve "wet compression", a method of injecting water between the stages of the turbine compressor to allow the turbine to run at conditions more closely resembling the 60 degree operation during warmer periods. This letter is written to inform the department that APP plans to proceed with commercial installation of the wet compression system, converting the test mode set up to a permanent installation.

APP believes that this addition constitutes a minor modification to the unit air permits (PSD: PSD-FL-185, Title V: 10502221-002-AV) because the addition of the wet compression system will have no effective impact on the unit emissions. Tests conducted on June 27 of this year showed that at full load, the emissions from the unit were a maximum of 53.6 pounds per hour and 13.6 ppm<sub>v</sub> of NO<sub>x</sub> and 1.5 ppm<sub>v</sub> of CO<sub>2</sub> with the wet compression operating. Specific test results are given in Table 1, attached. These results conform with the existing permit limits and will not require a change in the existing permit limits for operation. APP will continue to meet all short term emissions limitations as well as the annual ton per year limits established as a part of the permitting of the Auburndale peaker earlier this year. APP requests no changes to the existing permits other than to allow the operation of the wet compression system within the emission limits previously established in those permits.

APP appreciates your prompt review of this request. Conversion of the wet compression system is planned to begin during APP's scheduled outage beginning October 8, 2001. If you have any questions or need additional information regarding this matter, please contact me by telephone at (813) 637-7305 or via email at [bborsch@calpine.com](mailto:bborsch@calpine.com).

Sincerely,

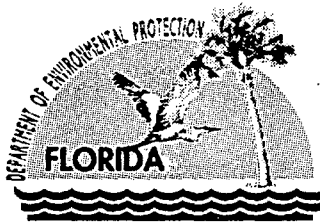
AUBURNDAL POWER PARTNERS, L.P.

  
Benjamin M. H. Borsch, P.E.  
Environmental Manager

Table 1

## Wet Compression Tests Conducted June 27, 2001

Time (Start time of 30 min. test)	Wet Compression Flow GPM	Fuel Use (mmBTU/hr)	Steam Injection Rate (klb <sub>m</sub> /h)	MW Output	NO <sub>x</sub> ppm @ turbine exit	NO <sub>x</sub> ppm @ stack exit	NO <sub>x</sub> Lb/hr @ stack exit
10:40 am	0	1044	61.74	101.2	36	14.8	57.4
1:45 pm	100	1072	63.97	118.4	26	13.6	53.64
3:15 pm	0	1151	73.68	105.0	23	11.6	49.49
4:30 pm	100	1190	76.97	115.7	21	10.8	48.31



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

October 19, 2001

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Benjamin M. H. Borsch, P.E.  
Environmental Manager  
Calpine / Auburndale Power Partners  
Island Center  
Suite 1200  
Tampa, Florida 33607

Re: Permit Applicability  
Inlet Foggers at Auburndale Power Partners, L.P.

Dear Mr. Borsch:

We reviewed your letter dated October 3, 2001 regarding permitting requirements to install inlet foggers on EU-001 at the Auburndale facility. The installation of the foggers constitutes a physical or operational change for the purpose of actually increasing heat input and power output from the combustion turbine/electrical generators on relatively hot and dry days. Typical CT's may produce up to 20% less power on a hot summer day than on a cold day. Since emissions are directly affected by fuel use and heat throughput, the Department concludes that installation and use of the foggers constitutes a modification requiring a permit in accordance with Rules 62-210 and 212, F.A.C.

The Department will require some time in order to evaluate your request and cannot authorize the installation until a permit has been issued. In order to assist the Department with its evaluation, please provide responses to the following questions:

- 1) Will fogging be used for oil operation or only natural gas?
- 2) Please identify the specific ambient temperature range during which the use of foggers is requested and the corresponding CT heat input vs. temperature relationship (curve) for each fuel where the use of foggers is requested.
- 3) Your letter stated that the fogger design is intended to replicate 60 degree F operation. Please identify the heat input at 60 degrees F for each fuel where the use of foggers is requested.
- 4) Please specify the annual hours of operation for which the use of foggers is requested. Alternately, you may use National Weather Service data to calculate hours above 60 degrees, however the Department intends to limit the use of foggers via annual hours. According to the National Weather Service, normal daily temperatures for Tampa, Florida exceed 59 degrees for each month.

If you have any questions regarding this matter, please call Michael Halpin at 850/921-9519.

Sincerely,

Michael P. Halpin, P.E.  
Bureau of Air Regulation

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*Printed on recycled paper.*

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- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

## 1. Article Addressed to:

Mr. Benjamin M. H. Borsch, P.E.  
Environmental Manager  
Calpine/Auburndale Power Partners  
Island Center  
Suite 1200  
Tampa, FL 33607

## 2. Article Number (Copy from service label)

7000 2870 0000 7028 2539

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

**COMPLETE THIS SECTION ON DELIVERY**

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R. MARZKA

B. Date of Delivery

02/29

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x R. Marzka

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Mr. Benjamin Borsch, P.E.

Street, Apt. No.; or PO Box No.

Island Center, Suite 1200

City, State, ZIP+4

Tampa, FL 33607

PS Form 3800, May 2000

See Reverse for Instructions