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MAR 13 2002

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TAMPA, FLORIDA 33607
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March 11, 2002

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 Peaker Energy Center
PSD Permit Number 1050221-004-AC
Construction of Wet Compression Addition

Dear Mr. Linero:

This letter is in response to questions received from Michael Halpin in your office regarding the application for modification of the subject permit to allow installation and operation of a wet compression system.

Question 1:

Can you confirm the Expected Performance (heat input) graph for the case of "No wet compression"? A review of your permit says that your heat inputs are 1369 and 1412 for gas and oil respectively, both at ISO conditions.

Response:

The 1369 mmBTU/hr on natural gas and the 1412 mmBTU/hr on fuel oil values in the permit are based on an LHV basis and include a 5% fuel flow margin to account for the possibility that the SWPC engine would perform better than guaranteed by SWPC. This is as noted in Tables 2-1 and 2-2 of the air permit application for the peaker unit.

The curve submitted with the request for permit modification to allow wet compression addition was on an HHV basis and was the vendor's quoted performance without the extra 5% margin.

Question 2:

Can you provide me with a technical basis for the "shaft limited performance" which shows up on the wet compression heat input graph?

Response:

The SWPC 501D5A combustion turbine has a maximum allowable megawatt output of 135 MW. This is due to mechanical limitations of the machine design and this limit is commonly referred to as the "shaft limit". The control

system of the machine will limit fuel flow to the machine whenever this shaft limit is reached. In the case of operation with wet compression, this 135 MW limit is reached at approximately 76 degrees F and operation at ambient temperatures below 76 degrees will require that the amount of water injected for wet compression be reduced to maintain a maximum power output of 135 MW. This results in less fuel flow to the engine as the ambient temperature drops below 76 degrees F as shown on the graph.

Please note that on the previously submitted figure, the range of shaft limited performance was shown between 76 and 95 degrees rather than between 60 degrees and 76 degrees. A corrected figure is attached.

We appreciate your prompt consideration of this issue and hope that these answers address the concerns of the department. If you have additional questions, or would like to have additional information regarding this issue, please do not hesitate to contact me via telephone at (813) 637-7305 or via email at bborsch@calpine.com.

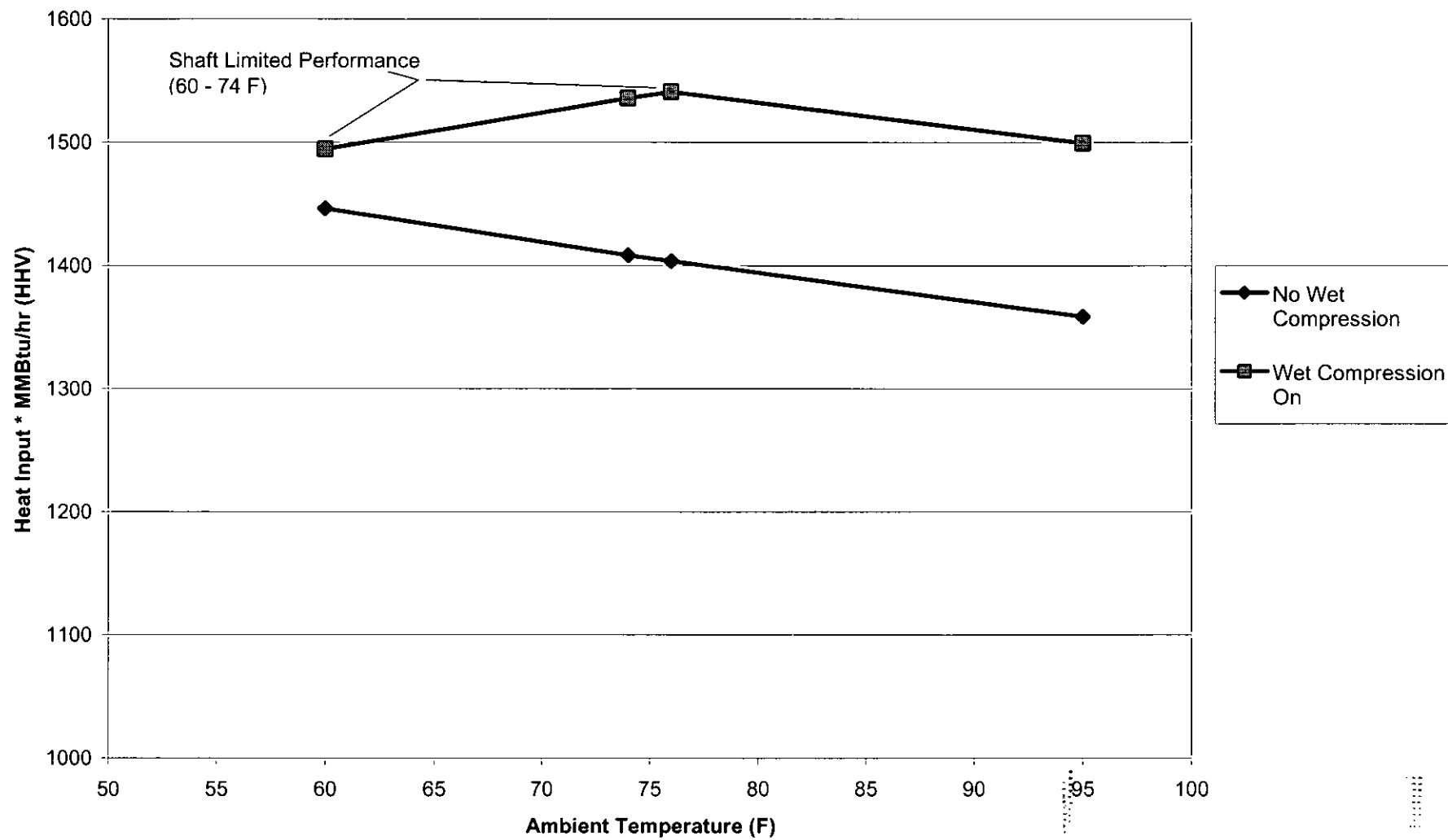
Sincerely,

AUBURNDALE PEAKER ENERGY CENTER, LLC

A handwritten signature in black ink, appearing to read "Benjamin M. H. Borsch".

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

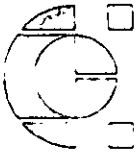
Figure 1
S-W D5A Expected Performance



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CALPINE

ISLAND CENTER
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February 18, 2002

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

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FEB 22 2002

BUREAU OF AIR REGULATION

**RE: Auburndale Peaker Energy Center
 PSD Permit Number 1050221-004-AC
 Construction of Wet Compression Addition**

Dear Mr. Linero:

Following the permitting of the wet compression system for the Auburndale Power Partners, L.P. (APP), Auburndale Peaker has decided to request permission for the addition of a similar wet compression system for the simple cycle Siemens Westinghouse D5A (emissions unit EU-006). The unit is under construction with an expected start up date of May 2002. The wet compression system will be constructed following receipt of this permit.

Auburndale requests a modification of the PSD permit for the simple cycle unit, emissions unit EU-006, located at the Auburndale Cogeneration facility to allow for the installation and operation of a wet compression system on that unit. This system will be operated only when the unit is firing natural gas as the fuel and only when the ambient temperature is greater than 60 degrees Fahrenheit. Expected performance of the wet compression system is shown in Attachment 1.

In connection with this modification, Auburndale will not be requesting any change in the existing permit limits for EU-006. These current limits are as shown below.

| | |
|----------------------|--|
| Allowable Operation: | 2,227,400 MMBtu of natural gas during any consecutive 12 month period; |
| NOx Emissions: | 25 ppm _{vd} (corrected to 15% O ₂) 115 Tons per year |
| CO Emissions | 10 ppm _{vd} (corrected to 15% O ₂) 99 Tons per year |
| VOC Emissions | 4 ppm _{vd} (corrected to 15% O ₂) |

Because the existing permit contains both specific emissions limits and a limit on unit operations, Auburndale believes that the addition of the wet compression system will

result in no net increase in the total emissions from the facility. Specifically, any increase in emissions related to an increase in hourly heat input will result in a reduction in the total number of hours of unit operation for that twelve month period as illustrated in the following example:

| Operating Case | Heat Input (MMBtu/hr) @ annual average ambient | Hours of Operation | Annual Heat Input (MMBtu) | NOx Emissions Rate (lb/MMBtu) | NOx Annual Emission (TPY) |
|--------------------|--|--------------------|---------------------------|-------------------------------|---------------------------|
| No Wet Compression | 1410 | 1580 | 2,227,400 | 0.092 | 102.5 |
| Wet Compression | 1535 | 1451 | 2,227,400 | 0.092 | 102.5 |
| Change | + 125 | - 129 | 0 | 0 | 0 |


The annual limit on heat input limits the annual emissions for all regulated pollutants to values equal to or less than the values established in the current permit and contemplated in that permitting review. In this regard, Auburndale believes that the department would be justified in modifying the subject permit to allow for the installation and operation of the wet compression system without making additional requirements in the permit limiting the operation of this system.

Auburndale understands the department's position to be that the addition of the wet compression system constitutes a physical change for the purpose of increasing heat input and production under certain ambient conditions. However, Auburndale believes that current permit restrictions as stated above will require that this change be made with no increase in emissions as demonstrated in the example above.

We appreciate your prompt consideration of this issue. If you have questions, or would like to have additional information regarding this issue, please do not hesitate to contact me via telephone at (813) 637-7305 or via email at bborsch@calpine.com.

Sincerely,

AUBURNDALE PEAKER ENERGY CENTER, LLC


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

cc. Mr. Halpin
 G. K. Smith, SWD

ATTACHMENT 1
HEAT INPUT AND EMISSIONS DATA
WET COMPRESSION OPERATION

Figure 1, attached, shows the expected performance of the unit with and without the operation of wet compression. Data without wet compression reflects performance previously submitted to the department as part of the initial permitting submittals.

Figure 1
S-W D5A Expected Performance

