



CALPINE

February 14, 2005

RECEIVED

FEB 15 2005

BUREAU OF AIR REGULATION

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

Mr. Michael Halpin
Florida Department of Environmental Protection
Division of Air Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Osprey Energy Center
PSD Permit Number FL-287
Request for Permit Modification to Allow Low Load Operation
1050334-006-AC

Dear Mr. Halpin:

As we have discussed previously, Calpine Construction Finance Company, L.P. (Calpine) is requesting permission to operate the Osprey Energy Center (Osprey) at loads below those stated in our initial air permit application. The department has previously issued a permit to allow Low Load Operation for a limited period of time to allow for testing of the emissions during low load operation and demonstration of the unit capabilities.

While the permit does not contain an explicit limit on the range of operation, the application specified a range of operation between 60 and 100 percent and specified emissions at different loads based on the guarantees provided by the turbine manufacturer. In addition, Condition 21 of the PSD Permit contains a reference to a specific condition on emissions of carbon monoxide (CO) between 60 and 70% of the full operating load.

In response to our earlier discussions and in accordance with the permit modification (DEP File Number 1050334-005-AC) granted January 7, 2005, Calpine has conducted testing of the Osprey units at loads between 35 and 40% of the nominal base load for each CT. A copy of the test report showing results of these tests is attached. The results indicate that Osprey is capable of operating the units in compliance with the current permit conditions at these low loads.

In keeping with these results, Calpine requests changes in Permit Conditions 21 and 25 of the PSD permit. These changes are essentially the same as the changes made to these two conditions in the temporary permit modification. Please note that Calpine is not requesting any modification of Condition 20.

Condition 21:

Condition 21 of the PSD permit currently states:

Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas shall exceed neither 10 ppmvd @ 15% O₂ on a 24 hour average to be demonstrated by CEMS for those days when no valid hour includes the use of duct burner firing, power augmentation or 60 – 70% operation (otherwise the limit is 17 ppmvd @15% O₂ on a 24-hr block average to be demonstrated by CEMS); and neither 10 ppmvd @15% O₂ nor 45 lb/hr per unit at 100% output with the duct burner off and no power augmentation to be demonstrated by annual stack test using EPA Method 10 or through annual RATA testing.

Calpine requests a minor change to Condition 21 so that in the future it will read (*changed language shown in italics*):

Emissions of CO in the stack exhaust gas (at ISO conditions) with the combustion turbine operating on gas shall exceed neither 10 ppmvd @ 15% O₂ on a 24 hour average to be demonstrated by CEMS for those days when no valid hour includes the use of duct burner firing, power augmentation or *operation below 70%, excluding periods of start up and shut down*, (otherwise the limit is 17 ppmvd @15% O₂ on a 24-hr block average to be demonstrated by CEMS); and neither 10 ppmvd @15% O₂ nor 45 lb/hr per unit at 100% output with the duct burner off and no power augmentation to be demonstrated by annual stack test using EPA Method 10 or through annual RATA testing.

Condition 25:

Condition 25 of the PSD permit currently states:

Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of the excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during both “cold start-up” to and shutdowns from combined cycle plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a start up to combined cycle operation following a complete shutdown lasting at least 48 hours. Operation below 60% output shall otherwise be limited to 2 hours in any 24-hour period.

Calpine requests a minor change to Condition 21 so that in the future it will read (*changed language shown in italics*):

Excess emissions resulting from startup, shutdown, or malfunction shall be permitted provided that best operational practices are adhered to and the duration of the excess emissions shall be minimized. Excess emissions occurrences shall in no case exceed two hours in any 24-hour period except during both “cold

Mr. Michael Halpin
February 14, 2005
Page 3

start-up" to and shutdowns from combined cycle plant operation. During cold start-up to combined cycle operation, up to four hours of excess emissions are allowed. During shutdowns from combined cycle operation, up to three hours of excess emissions are allowed. Cold start-up is defined as a start up to combined cycle operation following a complete shutdown lasting at least 48 hours. Operation below 30% output shall otherwise be limited to 2 hours in any 24-hour period.

Based on the results of the testing attached, Calpine believes that this change will not result in any increase in emissions.

We look forward to discussing this matter further with you as necessary to expedite this change in the permit. As the Title V permit for these units is also currently under review (Draft Permit Project Number 1050221-009-AV), a copy of this letter is being provided to Mr. Bobby Bull at the department. We will be submitting a separate letter requesting some technical changes to the PSD permit in order to better align the PSD with the forthcoming Title V permit. We are hoping to proceed now with this change since it will also require a minor modification of the Conditions of Certification (Condition 21 appears verbatim in the Conditions) and will therefore take some additional administrative time to come into effect.

If you have questions or need additional information regarding this request, please contact me by telephone at (813) 637-7305 or via email at bborsch@calpine.com.

Sincerely,

Calpine Construction Finance Company, L.P.



Benjamin M. H. Borsch, P.E.
Manager, Safety, Health & Environment

CC: Mr. Bobby Bull, FDEP w/o attachment
Mr. Robert Callery, Osprey Energy Center w/o attachment
Mr. William Sena, Osprey Energy Center w/o attachment
Gerson Waters, SWD
Gregg Staley, EPA
John Benyak, NPS
Clive Holladay, BAR
Buck Dunn, DEP