



CALPINE

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RE: 2004/5 Auburndale Energy Complex Title V and PSD Modifications
Auburndale Power Plant: PSD-FL-185; TV:1050221-007-AV
Auburndale Peaker Energy Center: 1050221-004-AC; TV:1050221-007-AV
Osprey Energy Center: PSD-FL-287
Federal Express Number: 7922391326424

This letter is in response to the Department's June 24, 2005 comment letter regarding the Auburndale Energy Complex's (Auburndale Power Plant, Auburndale Peaker Energy Center, and the Osprey Energy Center) pending PSD and Title V modifications. Calpine Corporation (Calpine) represents the involved parties. Requested modifications not addressed in this letter were addressed by the Department's response and have been accepted by Calpine. Calpine would be happy to meet with the Department to expedite this permitting effort.

APP-PSD-FL-185

- *Page 8 of 10, Condition 17-This condition requires the continuous monitoring of the steam to fuel injection ratio. The revisions to Subpart GG allow facilities to use a CEMS in lieu of monitoring the steam to fuel ratio. Calpine suggests removing this requirement, thereby relying on condition 16 for compliance.*

Request for re-review: Conditions A.15 and A.21 of the current Title V Permit have already been revised to state that the NOx CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring. Calpine believes the agency has already determined the water to fuel ratio is no longer necessary to be monitored for compliance purposes. Calpine requests that the PSD permit be updated to reflect this change. Further clarification of the agency's response is requested.

- *This condition requires the sulfur content, nitrogen content and the lower heating value of the fuel being fired be based on a 12-month rolling average from the fuel delivery receipts. Per EPA guidance for custom fuel monitoring plans and the Subpart GG modification, the owner may: (1) Cease to monitor nitrogen content*

of the fuel if a NOx CEMS is installed; (2) Monitor the natural gas sulfur content following the sampling requirements of section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75 (At least one sample shall be collected annually.); and (3) Review and retain a fuel oil sulfur analysis for each delivery of fuel oil. No review of the lower heating value is required in Part 60. Calpine requests this language be changed to: "Monitoring of fuel shall be consistent with the requirements of 40 CFR Part 60 Subpart GG."

Clarification: Part 75 requirements included by reference in Part 60 Subpart GG include the determination of the Gas Calorific Value (GCV) of the natural gas being fired on a monthly basis. Calpine believes the collection of this monthly natural gas data and heating values on the oil delivery certificates meet this requirement and that the language suggested will maintain this requirement. If the agency differs in this belief, please provide clarification.

- The Department listed the following items as under consideration: Items 3-9 and 11-13. Calpine awaits your response.

APEC-Construction Permit 1050221-004-AC

- *Page 1 and 2 of 13- The nominal load of the Peaker is listed as 104 MW. However, this was a typo made during the issuance of the PSD Permit and was never corrected. Calpine requests this value be updated to 120 MW. We feel this does not represent a change in the permit due to this change not increasing the permitted capacity listed in condition Page 4 of 13, Condition 3.*

Additional Information: Requirement 2 of the permit provides a maximum MW limit of 135 MW. In addition the permit application listed a MW output of 135 MW. Calpine is not requesting a change in this limit. This request is only to update the permit to show the correct nominal rating of the turbine to be 120 MW.

- *Page 7 of 13, Condition 18 (b)-This condition requests a verbal report within one day of a malfunction followed by a full written report with the quarterly excess emissions report. The OEC permit states that this report should only be provided upon request. Calpine believe this is the current understanding of the agency and requests, this language be undated to read, "...submitted in a quarterly report, upon request".*

Clarification: Calpine has routinely notified the agency of excess emissions within one working day and included excess emissions on the quarterly summary report. However, the summary report states that additional detailed information is only required in the event excess emissions exceed 1% of the operating time. Calpine requests the Department confirm that the new language ("summarized in the quarterly report") is intended to maintain this practice and will allow the facility

to report the malfunction on the excess emissions summary report with no additional reporting, unless the 1% operating time is exceeded, or unless specifically requested.

- *Page 10 of 13, Condition 31 Paragraph 2-The continuous compliance averaging language for the CEMS has been accurately reflected in the OEC PSD Permit (Page 10 of 13, Condition 30). Calpine requests this language be inserted into this condition. In addition to the OEC language, Calpine requests the additional OEC and APEC clarifications that missing data or out-of control periods are not to be included in the data averages and are to be included on the Excess Emissions Report as Monitoring System Downtime.*

Additional Information: The APP and OEC permits specifically state that an hourly value shall be calculated for each hour where at least two measurements are obtained at least 15-minutes apart. However, APEC indicates that an hourly average, where operation began during the last quadrant of the hour or operation ceased during the first quadrant of an hour, could consist of only one data point. One data point should not represent a valid hourly average. Calpine believes it has been and is currently the position of the Department that at least two data points must be collected to have a valid average. In conversations with the Tampa District Compliance and Enforcement Group, Calpine has come to understand that the District views two data points 15 minutes apart are required to record a valid hour.

Due to the three permits being combined under one Title V Calpine is looking for CEMS calculation consistencies, where appropriate. Calpine requests the agency reconsider this request and will be happy to discuss this issue verbally to provide further information.

- *Page 10 of 13, Condition 31 Paragraph 3-This paragraph provides the calculation methodology to determine the annual tons of NOx for EU-001 and EU-006. This calculation does not provide an accurate assessment of the tons emitted. Based on the first statement that all measurements shall be in pounds (converted to tons) and be based on a 12-month rolling total starting at the first day of each month, Calpine requests the language be updated to the following (changes are underlined): "...Each monthly total shall be calculated by adding each valid 24-hour total in pounds for the associated month for all fuels. For this calculation, valid operating hours exclude start-up emissions, shut-down emissions, CEMS downtime, and Emissions Unit down time. This total shall be combined with the emissions from the previous 11-calendar months and shall comprise a ~~valid~~ 12-month rolling total."*

Additional Information: The current language states that the facility should add the daily concentration averages and get the monthly total tons. This does not create a mathematically valid equation. Therefore, Calpine suggests the agency base the monthly total tons on the sum of the daily pounds emitted. Other options include the Department requiring the facility average each 24-hour concentration average over the month and then convert to tons based on operating parameters. Option 2 will not be as accurate as Option 1.

The language suggested regarding definition of valid operating hours is to provide consistency in exclusion of the emissions during hours of start-up, shut-down, malfunction, and those utilizing Part 75 missing data substitution with the calculation method for the daily totals and concentration averages.

Calpine requests the agency reconsider this request and will be happy to discuss this issue verbally to provide further information.

- *Page 10 of 13, Condition 31 Paragraph 4- This paragraph provides the calculation methodology to determine an annual emissions equivalent of NOx for EU001 (APP). This calculation does not provide an accurate assessment of the annual equivalent emissions. Based on the equation at the bottom of the page, the following text should be provided (changes are underlined): "For the 9-ppm annual equivalent emissions limit, which is being placed upon EU001, measurement shall be in ppmvd and be based on a 12-month rolling average. At the end of each day a daily average shall be calculated from the valid operating hours. For this calculation valid operating hours exclude start-up emissions, shut-down emissions, CEMS downtime, Emissions Unit down time, and operating on fuel oil. Monthly averages shall consist of the average of each valid daily average. This monthly average shall be averaged with the previous valid 11 monthly averages and shall comprise a 12-month rolling average. Valid daily and monthly averages shall only consist of days and months in which valid hourly data is available. In order to convert each 12-month rolling average to an equivalent limit,"*

Additional Information: The current language states that the facility should add the average daily concentrations to calculate the monthly average concentration and add the monthly average concentrations to calculate the annual equivalent. This does not create a mathematically valid equation. Calpine suggests that the average concentration for each period (day, month, year) be calculated by averaging the values from the shorter period (i.e. averaging hours to days, days to months, etc.).

The language suggested regarding definition of valid operating hours is to provide consistency in exclusion of the emissions during hours of start-up, shut-down,

malfunction, and those utilizing Part 75 missing data substitution with the calculation method for the daily totals and concentration averages.

Calpine requests the agency reconsider this request and will be happy to discuss this issue verbally to provide further information.

- *Page 11 of 13, Condition 31 Paragraph 1 on this page-The CO calculation is the same calculation discussed earlier for NOx. Please refer to bullet Page 10 of 13, Condition 31 Paragraph 3 for a discussion and adjust as appropriate.*

Additional Information: As discussed with the NOx calculation the calculation is not mathematically valid. Calpine requests the agency reconsider this request in the same vein as the request for revision of the NOx tons calculation and will be happy to discuss this issue verbally to provide further information.

- The Department listed the following items as under consideration: Items 3, 4, and 6. Calpine awaits your response.
- In addition to the issues previously identified, Calpine requests the following modifications be considered by the Department:
 - Clarification: Page 5 of 13, Condition 5-This condition states that fired natural gas shall contain no more than 2 grains per 100 dry standard cubic feet of gas on a monthly basis. However, Pages 12 and 13 of 13, Conditions 35 and 36 state that Part 75 Appendix D sulfur content may be used to show compliance. Part 75 states that users of pipeline quality natural gas may sample their gas on an annual basis. If this is not the case, Calpine requests a clarification.
 - Clarification: Page 6 of 13, Condition 9-The water injection technology section states “the system shall be designed and operated so as to ensure that NOx emissions do not exceed 25 ppmvd @15% O2”. However, other sections specifically state that NOx is limited to 25 ppmvd @ 15% O2 while burning natural gas and 42 ppmvd @15% O2 while burning oil. Calpine requests the language be updated to state “25 ppmvd @ 15% O2 on natural gas and 42 ppmvd @15% O2 on oil” .
 - Clarification: Page 7 of 13, Condition 18(b)-This requirement states that “up to 2-hours of monitoring data during any 24-hour period may be excluded from continuous compliance demonstrations as a result of startups, shutdowns, and documented malfunctions”. The requirement on page 11 of 13, Condition 33 states “periods of data excluded for all start-up

shut-down or malfunction episodes shall not exceed 4 hours in any 24-hour block period”, “data excluded for startup and shutdown shall not exceed two hours in any 24-hour block period”, and “data excluded for malfunctions shall not exceed two hours in any 24-hour block period”. Conditions 18(b) and 33 appear to contradict each other. Calpine requests the Department review these requirements and provide an appropriate clarification.

OEC-PSD-FL-287

- The Department listed the following items as under consideration: Items 2 through 6. Calpine awaits your response.

Draft Title V

- C.33(2)—*Calpine requests the Department establish a minimum number of operating hours on natural gas necessary to trigger the requirement to complete an annual stack test. Calpine proposes a 400-hour threshold similar to that established for oil.*

Calpine believes the Department has previously set precedent for the Department to extend the 400-hour compliance test exemption for liquid and/or solid fuels to include all fuels, including natural gas. Recently, the Department finalized a permit modification for the Santa Rosa Energy Center, PSD-FL-253, that states “In the event that the facility does not combust natural gas for greater than 400 hours during the fiscal year, the requirement for annual compliance tests shall be waived.” The Santa Rosa Energy Center only has the ability to burn natural gas. Therefore, Calpine requests this statement be added to the permit on a per fuel basis.

- The Department listed the following items as under consideration: Items 1-2 and 6-10. Calpine awaits your response.
- The Department did not address the following non-Subpart GG comments in relation to Section A and C and Calpine requests further information:
 - A.12, C.12, C.15(d), D.10—*Due to the combining of the various permits, Calpine requests clarification of the start-up/shut-down/malfunction time limits and 24-hour averages. Unless otherwise directed by the department, Calpine intends to meet these limits by (a) completing a start/stop/malfunction log (there-by recording compliance with the start-up/shut-down/malfunction time limits) and (b) excluding all hours (greater or less than the time limits) attributed to start-up/shut-down/malfunction and averaging the remaining operating 24-hours. Calpine does not believe this requires a change or clarification in the permit.*

FDEP-Southwest District has indicated that this is not their interpretation of compliance. Calpine requests that the Department's interpretation be written into the permit.

- *A.35—As discussed above in connection with A.12, startup, shutdown, and malfunctions are excluded from the 24-hour emissions average. Therefore, no excess emissions shall be reported due to startup, shutdown, or malfunction.*

Please see discussion above.

- *A.12, C.12—Calpine's original understanding was that start-up, shut-down, and Part 75 missing data emissions were not to be included in the NOx TPY calculation. The Draft Permit currently states that the calculation should exclude missing data. However, the permit goes on to say that the total must match the data submitted to the Acid Rain Web Site. Data submitted to the Acid Rain Web site includes start-up, shut-down, and Part 75 missing data emissions. These two statements are contradictory. Calpine requests this language be deleted or further clarification be provided.*

Calpine requests the Department's continued consideration of our request for this revision.

The Department's correspondence indicated that the following items will be clarified and revised in the Draft Permit Revision: item 8 in the APP PSD permit, item 6 in the APEC PSD permit and items 4 and 5 in the Title V draft permit. Calpine would appreciate review of the new language prior to Public Notice.

In addition to the current permit modifications under discussion, Calpine is currently working with Mike Halpin to make PSD permit modifications that will allow for a maximum lb/day limits during any day that a start-up, shut-down or malfunction occurred. This is a separate permitting effort. However, Calpine would like all parties to be aware of this parallel effort.

Mr. Jeffery F. Koerner, P.E.

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We look forward to discussing this matter further with you as necessary to expedite this change in the permit. 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 or Ms. Heidi M. Whidden by telephone at (813) 637-7316 or via email at hwhidden@calpine.com.

Sincerely,

Calpine Construction Finance Company, L.P.

Auburndale Power Partners, L.P.

Auburndale Peaker Energy Center, LLC



Benjamin M. H. Borsch, P.E.

Director—Safety, Health & Environment

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