



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 7, 1997

Farzie Shelton, Environmental Coordinator
Lakeland Electric and Water
501 East Lemon Street
Lakeland, FL 33801-5050

RE: Charles Larsen Memorial Power Plant
Unit 8--Combined Cycle Gas Turbine
Amendment to Permit Nos: PSD-FL-166/AC53-190437

Dear Ms. Shelton:

The Department has evaluated your recent letter which contained calculations of 30 day averages of NO_x emissions from the CEMS data. The graph included with the letter did not indicate whether all the CEMS data were used or whether certain periods were excluded from the 30 day rolling averages. Also, there is no indication of whether the actual oxygen concentrations were used to correct the NO_x data or whether constants were substituted during periods when oxygen concentrations were high. Lastly, it is not clear how an operating day was defined for these 30 day rolling averages, i.e., were only days consisting of 24 hours of continuous operation included in the calculations, or, if only 30 minutes of operation in a day were logged, was this considered an operating day for purposes of the 30 day rolling average? These questions should be answered to help the Department further analyze your request for a 30 day rolling average.

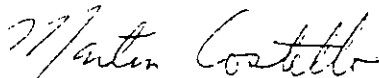
The acid rain CEMS data was used by the Department to calculate long term rolling averages for several quarters, including the 2nd quarter of 1997 as you graphed. Our data shows that during some startups NO_x emissions exceeded 25 ppm while other startups occurred without exceeding 25 ppm. Please explain why excess emissions occur during some startups. When we included all data, including startups, shutdowns, and malfunctions, the 30 day rolling averages all fell below 25 ppm and most of the averages were closer to 20 ppm. This suggests, that with some operational improvements, mainly during startups, an equivalent BACT standard for NO_x based on a 30 day rolling average including startup/shutdown/malfunctions would be close to 20 ppm.

Farzie Shelton
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The current construction permit (referenced above) specifies a BACT limit of 25 ppmvd @ 15% O₂ and compliance demonstration by Method 20. Because the stringency of the original BACT must be preserved, the 30 day rolling average emission limit must be reduced to a level which equates to the original limit.

If you have questions please contact me at (904) 488-1344.

Sincerely



Martin Costello, P.E.
New Source Review Section

cc: Ed Svec

MC/mc

P 265 659 465

US Postal Service

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3. Article Addressed to:

Mrs. Gonzie Shelton, EC.
Lakeland Electric & Water
501 E Lenoir St.
Lakeland, FL

33801-5050

4a. Article Number

P 265 659 465

4b. Service Type

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