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April 20, 1995

Mr. A. A. Linero, PE
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Linero:

Subject: **Key West, City Electric System**
Proposed Relocation of 23-MW Combustion Turbine
Permit File No. AC44-245399, PSD-FL-210

On behalf of City Electric System (CES) we are responding to your letter dated April 10, 1995. In order to complete the application, your letter has questions in the areas of the significance of SO_2 emissions and availability of dry low NO_x technology. Our response is as follows:

Comment 1

The letter indicates that CES will use 0.05% sulfur fuel oil. Please recalculate SO_2 emissions based on the new sulfur limit of the fuel oil. Indicate if SO_2 emissions still exceed the PSD significance level, and SO_2 is subject to PSD review. Also, indicate if any other pollutants are affected by this change.

Response

Based on the requested (and current) operating restriction of 2888 hours per year, use of 0.05% S fuel oil will result in potential emissions of 24TPY rather than 243TPY shown in Table 4.1 of the application (based on 0.5% S fuel oil). Since 24TPY is less than the PSD significance level of 40TPY, the SO_2 emissions are subject to neither BACT nor impact analysis requirements and the corresponding Sections of the application should be disregarded. The change in fuel oil sulfur content has no effect on other pollutants.

1125 Seventeenth Street, Suite 1900 Denver, CO 80202-2615 Phone (303) 299-5200 Fax (303) 297-2811

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Comment 2

GE Power Generation Services letter dated May 31, 1994, which was submitted as a response to the first incompleteness letter, indicated commercial availability of a dry low NO_x retrofit for Frame 5P by the fourth quarter of 1995, with field testing prior to third quarter of 1995. Please update the Department on the availability of the retrofit for the Frame 5P combustion turbine.

Response

Based upon follow-up with the Tampa, FL and Denver, CO representatives (author of letter and Howard Spery at (303)753-2263) of GE, the letter is correct except for the expected field testing date. We understand that the first unit has been shipped with installation in the next two months and test data collection in the third quarter of 1995. Dry low NO_x on oil firing which also requires water injection in the fuel system is expected to result in 65ppm NO_x at full load, similar to expected emissions with greater water to fuel ratios (as analyzed in Section 4.6 of the application). Based on the untested status of retrofit dry low NO_x technology on Frame 5P and expected equivalent emissions at higher cost than increased water injection, the demonstration of 75ppm as BACT is unchanged from the application.

We believe this response should provide adequate information on which FDEP can base the permit review. We would appreciate a completeness letter in due course. Should you have any questions or comments, please call me at (303)299-5234.

Sincerely

R. W. Beck

Michael D. Henderson

MDH:sak

cc: Clere, BAR
EPA
NPS
D. Knowles, SFD

cc: *Jim Greenshields, CES*
Skip Jansen, CES
Nick Guarriello