



Miami-Dade Water and Sewer Department
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February 14, 2008 BUREAU OF AIR REGULATION Certified Mail 7001 0360 0001 6783 5306
 Return Receipt

Mr. Al Linero, P.E.
 Administrator, Air Permitting South
 Division of Air Resource Management
 2600 Blair Stone Road, M.S. 5500
 Tallahassee, Florida 32399-2400

Subject: Application for air construction permit for the Alexander Orr, Jr.
 Water Treatment Plant, Facility I.D. No. 0250314, FDEP File
 0250314-010-AC

Dear Mr. Linero:

Miami-Dade Water and Sewer Department (MDWASD) is in receipt of your request for additional information dated December 18, 2007, relative to the subject application. Below please find our response to your questions. Please note that MDWASD has recently submitted an application for air operation permit revision to Mr. Hoefert at FDEP/SED to incorporate the provisions of the current Air Construction Permit 0250314-009-AC as regards Emissions Unit (E.U.) 024, which is now operational. This subject air construction permit application affects the conditions specified in that application for air operation permit revision and may bear on the FDEP/SED's processing of said application for revision.

Response to FDEP

The application contains three Tables: Table 4-2 (Page 20 of the report); Table 4-3 (Net Emissions Change) and Table A-2 (Net Emissions Change) that appears to contain conflicting information:

1. *Table A-2 refers to the four (4) existing generators with a listed NOx emissions of 517.347 TPY. How this number compares to the baseline NOx emissions of 258.67 TPY in Table 4-3 Net Emissions Change?*

Table A-2 *Fuel Consumption* in the appendices is supporting documentation and is perhaps not labeled as clearly as it might have been. The total of 517.347 TPY represents a 24-month total over the entire baseline period from November 1997 to October 1999, as noted in Note 2 of the table. The figure in Table 4-3 of 258.67 TPY is one half of the 24-month total and represents the baseline NOx emissions on an annual basis.

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2. *Table A-2 refers to the four (4) existing generators with a listed fuel consumption of 2,294,266 gal/yr. How this number compares to the baseline fuel consumption of 1,147,133 gal/yr in Section F1 for each pollutant?*

Similarly, the total of 2,294,266 gal/yr shown in Table A-2 represents a 24-month total over the entire baseline period from November 1997 to October 1999, as noted in Note 2 of the table. The figure in Section F1 for each pollutant of 1,147,133 gal/yr is one half of the 24-month total and represents the baseline NOx emissions on an annual basis.

3. *Are the emissions from Unit 5 considered in the overall baseline summary or in the projected summary? Are emissions from Unit 5 considered as an existing unit or as a new unit in Table 4-3 Net Emissions Change?*

The emissions from Unit 5, and Unit 6 for that matter, are at all times considered only as a portion of the total emissions from the bank of EMD generators, E.U. IDs 009-012, 024, and 025, which are regulated collectively and subject to a collective limitation on annual fuel consumption and to a common limitation on NOx emissions rate and fuel sulfur content. Unit 5 (E.U. 024) is a new unit that was not in service during the baseline period; Units 5 and 6 can be expected to fall under the projected emissions when they are completed and placed in service. However, in no case are additional emissions being requested as a result of the two new units, they will fit under the existing emissions caps. In fact, the permitted emissions cap for NOx is being significantly lowered from the current 402.26 TPY (1.415 Mgal/yr fuel and 4.12 lb/MMBtu NOx) to 281.52 TPY (1.2 Mgal/yr fuel and 3.40 lb/MMBtu NOx) as a result of this application.

4. *What is the unit maximum heat input rate of proposed Unit 6?*

Based on the manufacturer's specifications (see page 15 of the Report), the maximum heat input rate of Unit 6 (E.U. 025) is:

At full load (100%): $(0.336 \text{ lb/bhp-hr}) \times (4000 \text{ bhp}) \times (18,360 \text{ Btu/lb}) = 24.7 \text{ MMBtu/hr}$

At peaking load* (110%): $(0.339 \text{ lb/bhp-hr}) \times (4400 \text{ bhp}) \times (18,360 \text{ Btu/lb}) = 27.4 \text{ MMBtu/hr}$

*Note that peaking load is not a normal operation mode and may be reached no more than one hour in any 12 hours.

5. *Pursuant to Rule 62-210.400(2)(a)3. F.A.C Hybrid Test for Multiple Types of Emissions Units. Please present an emissions scenario when the existing units will be operating concurrently with the proposed unit as described in the application. If the existing five units are operating at the same time with new Unit 6, please resubmit the operating emissions scenario and calculations in Table 4-3 Net Emissions Change. Refer to Rule 62-210.209(179)(f) "Net Emissions Increase".*

In the current Air Construction Permit 0250314-009, the proposed units along with the existing units are regulated collectively, as a single bank of generators. Under that schema, individual units, new or existing, cannot be readily considered separately to perform a true Hybrid Test for Multiple Types of Emissions Units pursuant to Rule 62-212.400(2)(a)3. F.A.C. After further review, it is our interpretation that a hybrid test is

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intended to sum the emissions increases from two separate and distinct facility modifications, specifically modifications to existing emissions unit(s) and construction of new emissions unit(s). The fact that, in the case of this application, the new units will become part of an existing bank of collectively-regulated units and cannot be broken out and evaluated separately, nor need be, indicates that the term "hybrid test" as used in the Report may have been a misnomer.

In actual fact, what was performed in the Report was, in effect, a Baseline Actual-to-Potential Applicability Test for Construction of New Emissions Units pursuant Rule 62-212.400(2)(a)2. F.A.C. with the potential emissions based on the emissions for the entire bank of six (6) EMD generators, four (4) existing and two (2) proposed, under the modified combined fuel cap and common NOx emissions rate. This method gives the actual net increase in emissions and is the only feasible method of performing this calculation.

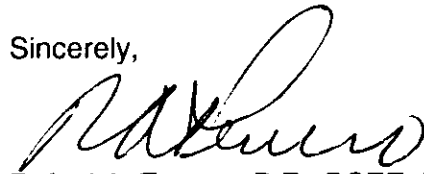
So, in specific answer to the question, the emissions scenario presented in Section 5 of the Report does indeed represent an emissions scenario when the existing units will be operating concurrently with the proposed unit(s) as described in the application.

6. *If any of the pollutants exceed the PSD significant threshold level due to the new calculations, please submit the appropriate BACT analysis for that pollutant. Please refer to Rule 62-212.400(2)3. Hybrid Test for Multiple Types of Emissions Units and to the Rule 62-210.200(34) "Baseline Actual Emissions" and "Baseline Actual Emissions for PAL"; Rule 62-210.200 (179) "Net Emissions Increase".*

As indicated above, the calculations in the submitted Report represent the net emissions increase for the collectively-regulated bank of generators and these increases do not exceed the PSD threshold under Chapter 62-212 F.A.C.

As the designated Responsible Official of this facility, I certify this application to be true, accurate, and complete based upon information and belief formed after reasonable inquiry. Please contact me at (786) 552-8112 or Mr. Richard M. O'Rourke, P.E. at (786) 552-8123 if there are any questions regarding this application.

Sincerely,



Rafael A. Terrero, P.E., BCEE, M.ASCE
Assistant Director, Water System Operations

RAT/RMO/JRP

c: Lee Hoefert, FDEP/SED
Teresa M. Heron, FDEP/TAL
Mallika Muthiah, MD-DERM