



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

343 COURTLAND STREET  
ATLANTA, GEORGIA 30365

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Mr. Clair H. Fancy, P.E., Chief  
Bureau of Air Regulation  
Florida Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: Florida Power & Light (FPL) - Sanford Unit #4 Orimulsion  
Testing

Dear Mr. Fancy:

We have received an April 2, 1990, letter from Mr. William H. Green, representing the above referenced facility, requesting that EPA conduct a review of the proposed test burn of Orimulsion in Unit #4 at their Sanford plant. We have reviewed this submittal and offer the following comments.

APPLICABILITY OF NSPS

We concur with the conclusion by FPL that NSPS should not apply to the firing of Orimulsion because a modification as defined in 40 C.F.R. Section 60.14 will not occur because of the exemption at 40 C.F.R. Section 60.14(e)(4). The exemption at 40 C.F.R. Section 60.14(e)(4) is applicable because, as originally constructed, Sanford Unit 4 could accommodate Orimulsion with only minimal changes to the burners.

COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES

We do not concur with the proposed test procedures for SO<sub>2</sub> and NO<sub>x</sub> proposed in Table 4-1 of Exhibit 1. We believe that SO<sub>2</sub> and NO<sub>x</sub> CEMs should be utilized and that short term averages (3-hour block) should be used to determine compliance. In addition, similar test procedures for Units 3 and 5~~4~~ should be proposed. Appendix F should be followed in order to ensure the quality of the emissions data. The basis for the use of both SO<sub>2</sub> and NO<sub>x</sub> CEMs is that fuel sampling and analysis will not detect possible swings in the sulfur content of Orimulsion and that the NO<sub>x</sub> emissions may be erratic due to the unknown firing characteristics in Sanford Unit 4. We recognize that Method 7E utilizes a CEM, however, the method test run is too short term to be acceptable.

Method 5 of 40 C.F.R. Part 60, Appendix A, is acceptable for determining compliance with the particulate matter emission limitation; however, the frequency should be clarified. Historically, the average of three 1-hour long Method 5 test runs is used to determine compliance. In addition, the enclosed procedure which can be performed in conjunction with a Method 5 test run should be considered for determining compliance with the metals emission limits.

#### PSD APPLICABILITY

1. April 2, 1990, Memorandum: "Ramifications..."

The applicable exemption under PSD for using an alternative fuel states:

"Use of an alternative fuel or raw material which the facility was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after 1/6/75, pursuant to 40 C.F.R. 52.21 or under regulations approved pursuant to 40 C.F.R. Subpart I or 40 C.F.R. 51.166."

FPL states (on Page 6) that "No federally enforceable permit condition precludes the use of Orimulsion." This does not appear to be correct. In order for FPL to be able to burn Orimulsion, the State must issue a variance from certain portions of their SIP, i.e., regulations approved pursuant to 40 C.F.R. Subpart I. Although operating permits are not considered to be federally enforceable, any conditions contained in an operating permit which are also a part of the SIP would be federally enforceable permit conditions. The PSD regulations, including the preambles published with these rules, do not discuss all of the possible ramifications of this type of project. For example, it is unclear if a relaxation to the SIP (and permit) would then allow a possible exemption from PSD. Also, as discussed later, the term "capable of accommodating" is not defined in sufficient detail to evaluate the proposed changes to the facility.

As discussed on page 6, the COM test at Sanford Unit #4 required the addition of coal pulverization and conveyance equipment. The modifications were determined to trigger PSD for the facility. Also, even though the boiler modifications themselves were minimal for the COM test, BACT was required at that time. (Note: No additional control equipment was required.) FPL states that "If a modification is exempted from NSPS, then it can be argued that the emissions increases of the source should not require PSD review." This is incorrect. The July 7, 1986, memorandum from Gerald Emison clearly points out that the NSPS exemptions regarding modifications

do not automatically affix themselves to the PSD regulations. FPL will be adding hot water heat exchangers, circulating hot water pumps, a hot water storage tank and an Orimulsion fuel flow meter. The hot water system is needed to ensure that the fuel remains at the proper temperature and is delivered to the boiler without physical breakdown of the fuel. The addition of these appurtenances is analogous to the preconditioning system of any new fuel, e.g., a coal pulverization unit, etc. Therefore, we do not believe that the facility is capable of accommodating Orimulsion. We do, however, agree with FPL in that the boiler itself is capable of accommodating Orimulsion and therefore the company should not be required to perform a BACT analysis. In summary, we have concluded that the proposed burning of Orimulsion at FPL's Sanford Unit #4 will trigger PSD, but a BACT analysis will not be required for the boiler.

2. Pollutants Subject to PSD - Table 3-2:

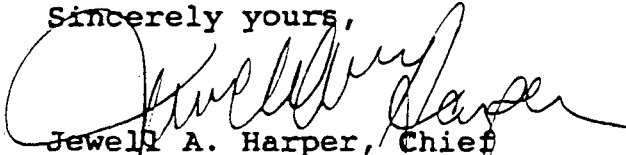
For PSD purposes, potential emission increases from a modification are compared to past actual emissions. This comparison is performed on a tons per year basis. Therefore, we will assume that the Orimulsion testing will occur within a one-year period. The potential emissions associated with burning Orimulsion during the testing appears to have been calculated correctly, based on 120 full power days. FPL did not, however, include the potential emissions resulting from any fuel oil burning which could occur the remainder of the year (245 full power days) when Orimulsion is not being burned.

The past actual emissions were not based on actual operating data, hours of operation, etc. FPL used AP-42 factors and assumed 120 full power days in the calculation of past actual emissions. These calculations should be based on actual operating hours and emission rates. If actual emission rates are not known, then FPL could use AP-42 emission factors.

As a general note, we feel that the proposed particulate emission limitation of 0.338 lb/mmBTU is too high considering that the uncontrolled particulate emission rate is reported to be 0.22 lb/mmBTU (See Table 3-1 of Exhibit 1).

We hope these comments will aid in your agency's review of this matter. If you have any questions about this letter, please contact Mark Armentrout of my staff at (404) 347-2904.

Sincerely yours,



Jewell A. Harper, Chief  
Air Enforcement Branch  
Air, Pesticides and Toxics  
Management Division

cc: Mr. William H. Green  
Hopping Boyd Green & Sams

Martin A. Smith, FPL

