

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET

POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(904) 222-7500

FAX (904) 224-8551

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPEL
GARY P. SAMS
ROBERT P. SMITH, JR.

LYDIA R. ANNUNZIATA
KATHLEEN BLIZZARD
THOMAS M. DeROSE
RICHARD W. MOORE
DIANA M. PARKER
LAURA BOYO PEARCE
MICHAEL R. PETROVICH
DAVID L. POWELL
DOUGLAS S. ROBERTS
CECELIA C. SMITH
SAM J. SMITH
CHERYL G. STUART

September 28, 1990

OF COUNSEL

W. ROBERT FOKES

BY HAND DELIVERY

RECEIVED

SEP 28 1990

DER-BAQM

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

Re: FPL Orimulsion Test Burn

Dear Mr. Fancy:

In your letter dated September 26, you noted that FPL was now planning to delete Slipstream Test 1A, the spray dryer and associated pulse jet fabric filter, from the proposed Orimulsion test. You indicated an interest in learning why FPL believed that data derived from the burning of coal was adequate to allow the selection and scaling up of that pollution control device but, at the same time, would not be adequate to allow the other pollution control devices to be scaled up from coal burning data. In essence, you questioned why the remaining equipment test would be necessary to be conducted while burning Orimulsion.

As discussed in the meeting in your offices yesterday with Dr. Ken Olen and others, the majority of the pollution control equipment testing proposed for the Orimulsion test burn relates to the need to obtain specific information on the control of emissions produced by the combustion of Orimulsion which cannot be obtained by study of the emissions from any other fuel source. In particular, the test proposes major baghouse testing for Slipstream 1B and Slipstream 2. Although baghouse technology is to a large extent conventional, no one has tested the ability of baghouses to remove the very fine particulate matter

Mr. Clair H. Fancy
September 28, 1990
Page 2

anticipated to be produced from the combustion of Orimulsion. That is why FPL has proposed fairly extensive testing of baghouse fabric materials to determine whether the collected particulate matter will cause that material to become blinded and ineffective and also to determine whether pressure drops created by collected particulate matter will be tolerable. It will be necessary to take the bags through several cycles of operation, requiring several months per fabric, in order to fully answer these questions. There is no substitute for the testing of pilot bags on emissions produced from Orimulsion burning.

In contrast, the slipstream test originally proposed for Slipstream 1A involved a spray dry absorber followed by a pulse jet fabric filter. The spray dryer absorbent system was intended to remove sulfur dioxide gases from the relatively high sulfur containing Orimulsion fuel emissions. The reasons FPL originally proposed to test the spray dryer were two-fold: first, FPL was unable to uncover sufficient performance data for spray dryer controls of SO₂ emissions produced by high sulfur fuels to satisfy itself that the relatively expensive lime injection technology would efficiently remove sulfur dioxide in that case; most information, until recently, appeared to be limited to the performance of spray dryer technology in removing sulfur dioxide from low sulfur western coals and from relatively low sulfur municipal waste combustion emissions. Second, an elucidation of the waste-handling characteristics of the solid wastes produced by this throw-away technology was needed; it was envisioned that the Florida Institute of Technology (FIT) would collect the waste from the pilot test and determine how it could be stabilized prior to disposal.

FPL is in the fortunate position of now being able to answer both of these spray dryer-related questions without conducting the Slipstream 1A test. FPL has been made aware of recent further studies of the use of spray dryer pilot technology on relatively high sulfur content fuel. The Electric Power Research Institute has confirmed that the spray dryer technology can be scaled up as far as this question is concerned for the use on Orimulsion without the need for further lime removal efficiency tests. In addition, FIT, under contract with FPL, is running waste characterization studies on laboratory-produced spray dryer

Mr. Clair H. Fancy
September 28, 1990
Page 3

waste that includes Orimulsion fly ash produced by the Dalhousie demonstration test in Canada. Although these tests are continuing in order to establish the leaching characteristics of the waste, FIT has successfully determined the stability characteristics of the waste. Therefore, the two main research objectives for testing Slipstream 1A can be accomplished without the need for on-site testing at Sanford.

The deletion of Slipstream 1A testing from the overall test plan will mean that the additional personnel required to conduct that test and the approximately one and one-half flatbed truckloads of equipment at the site and the associated costs will not be needed. On the other hand, the remaining Slipstream 1B and Slipstream 2 testing will still be necessary. As Dr. Olen pointed out, the Slipstream 2 test involves not only the reverse air baghouse fabric testing, but also involves pilot testing of an alkali scrubber in conjunction with a SOXAL sorbent regenerate system. Unlike the case for the spray dryer in Slipstream 1A, the performance of the alkali scrubber/SOXAL system is expected to be fuel dependent and must be tested in order to determine whether this technology can be used for Orimulsion. That fuel dependency exists because the SOXAL system utilizes a membrane that can be metal sensitive. Its performance cannot be established unless it is placed behind a baghouse that is actually treating Orimulsion emissions.

Please find attached to this letter copies of the earlier submitted schematic diagram of the Orimulsion test, tables relating to solid and liquid wastes, emissions analysis, and pollution control equipment, all of which have been marked up to show the deletion of Slipstream 1A from the test.

We regret any inconvenience that this minor change in the overall test program may have caused you and your staff in your finalization of the project review. In any event, however, the deletion of Slipstream 1A does not diminish the need to carry out the fuel dependent baghouse and SOXAL system testing, or the boiler performance testing at Sanford Unit #4 needed to determine the feasibility of Orimulsion use as a permanent fuel for FPL, and to arrive at the most cost-effective emissions reduction control system for a permanent conversion.

Mr. Clair H. Fancy
September 28, 1990
Page 4

Thank you for your continued consideration and assistance in this matter.

Sincerely,



William H. Green

Attorney for Florida Power &
Light Company

WHG/wrn

Enclosures

cc (w/enc):

Dr. Martin A. Smith

Ms. Elsa A. Bishop

Dr. Ken Olen

Ms. Cindy Phillips

David Schwartz, Esquire