

10/4/90

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the matter of:

Petition for Authorization to
Conduct Testing and Research;
Florida Power & Light Company

ORDER AUTHORIZING RESEARCH AND TESTING

By Petition filed April 2, 1990, Florida Power & Light Company (FPL) seeks authorization pursuant to Section 403.061(18), Florida Statutes, and Rule 17-103.120, Florida Administrative Code, to conduct testing and research and to temporarily exceed limitations of the State Implementation Plan (SIP), Chapter 17-2, Florida Administrative Code, and Air Operating Permit No. A064-132055.

FINDINGS OF FACT

1. FPL proposes to test the performance of "Orimulsion", an emulsified fuel produced from a naturally occurring Venezuelan bitumen, in its Sanford Unit No. 4 Power Boiler. The proposed test location is at FPL's Sanford plant on U.S. Highway 17-92 between Sanford and DeBary, Florida. FPL seeks to conduct the test burn of Orimulsion in its Sanford Unit No. 4 Power Boiler for 120 full-power burn days equivalent. FPL requests an 18 month test period beginning on the first test burn day.

2. A Canadian test of Orimulsion indicates that the stability and combustion characteristics make the fuel suitable

for power generation. However, the design differences between the Canadian 100 megawatt corner-fired unit and FPL's Standard 400 megawatt front-wall fired unit necessitate additional testing. Further, information is lacking on the performance of available technologies for removing particulate matter and sulfur dioxide emissions from the firing of emulsified products such as Orimulsion. Thus, performance information must be generated through a demonstration test burn in order to enable proper design and sizing of necessary pollution control equipment that FPL will install if it commits to, and obtains approval for, permanent power generation using Orimulsion.

3. By switching from residual oil to Orimulsion, FPL seeks to substantially increase Florida's supply of readily available energy and reduce customers' energy costs.

4. On the basis of earlier test work, including the Canadian test, it is estimated that emissions from Sanford Unit No. 4 during the test burn would exceed currently permitted levels for sulfur dioxide, particulate matter, and opacity.

5. During the test period, FPL shall use only natural gas and/or fuel oil equivalent to 1.1 lb. SO₂/MMBtu at Units Nos. 3 and 5 in order to partially offset the projected sulfur dioxide emissions increase at Unit No. 4.

6. Public notice of the Department's intent to revise the State Implementation Plan and issue a Prevention of Significant Deterioration (PSD) permit in accordance with the request to conduct research and testing was published in newspapers of general circulation in the Sanford area and in the Florida Administrative Weekly between August 2 and 7, 1990. No

petitions for a Section 120.57, Florida Statutes, hearing or motions for extension of time in which to file for a hearing were filed within 14 days of publication of notice.

7. In accordance with Rule 17-103.120(1)(b), Florida Administrative Code, and 40 CFR 51.102, a duly noticed public hearing was held in DeBary, Florida, on September 6, 1990, to receive public comment. State Representative Stan Bainter asked questions concerning potential effects of an Orimulsion spill, fuel processing and refining, wastewater, and long-term contracts for residual oil, which were responded to by FPL representatives. Brian Johnson, a resident of DeBary, Florida, commented favorably on the project. No other public comment was made at the public hearing.

8. The Department concurs and finds adequate FPL's comments of September 5, 1990, attached to this Order, in response to EPA's letter dated August 30, 1990. The Department also concurs with FPL's responses to Rep. Stan Bainter's questions pertaining to Orimulsion fuel processing and refining.

9. Modeling performed by FPL indicates that granting the requested relief from current emission limits will not jeopardize compliance with state and federal ambient air quality standards and applicable PSD increments, and will not interfere with attainment of ambient air quality standards in nonattainment areas. To ensure compliance with interim requirements, a comprehensive environmental monitoring program has been proposed, including emissions and ambient air quality monitoring to be performed by FPL.

10. There are no standards of performance for new sources contained in 40 C.F.R. Part 60 or National Emissions Standards for Hazardous Air Pollutants contained in 40 C.F.R. Part 61 which apply to the facility. Because the boiler as originally constructed can accommodate Orimulsion with only minimal changes to the burners, the proposed test will not trigger the application of New Source Performance Standards (NSPS) to the boiler emissions, and there is no requirement that Best Available Control Technology (BACT) be applied.

CONCLUSIONS OF LAW

1. The relief requested is within the scope of Section 403.061(18), Florida Statutes, and Rule 17-103.120, Florida Administrative Code.

2. Pursuant to Rule 17-103.120, Florida Administrative Code, any condition contained in this Order which is different than any requirement established by rule, permit or certification condition, or Department order, shall be effective for no more than two years from the date of this Order.

ORDER

Having considered FPL's written request, the supporting documentation, the record of public hearing, and the foregoing findings of fact and conclusions of law, it is

ORDERED that:

A. FPL is authorized pursuant to Section 403.061(18), Florida Statutes, and Rule 17-103.120, Florida Administrative Code, to conduct the above-referenced research and testing and to temporarily exceed emission limits in the SIP, Chapter 17-2, Florida Administrative Code, and Air Operating Permit No. A064-132055 for sulfur dioxide, particulate matter, and opacity. FPL shall comply with the following emission limiting standards for Sanford Unit No. 4 while firing Orimulsion fuel:

- (a) Particulate Matter: Steady-state - 0.3 lb/MMBtu; Excess emissions, not to exceed 3 hours per 24-hour period, for soot-blowing, startup, shutdown, and load changes - 0.6 lb/MMBtu; Excess emissions, not to exceed 2 hours per 24-hour period for malfunction - 0.6 lb/MMBtu.
- (b) Sulfur Dioxide: 4.3 lb/MMBtu heat input.
- (c) Visible Emissions: Steady-state - 60% opacity; Excess emissions, not to exceed 3 hours per 24-hour period, for soot-blowing, startup, shutdown, and load changes - 100% opacity; Excess emissions, not to exceed 2 hours per 24-hour period, for malfunction - 100% opacity.

B. Sanford Unit No. 4 shall be fired with Orimulsion fuel, No. 6 Residual Oil, No.2 Fuel Oil, or natural gas only.

C. Sanford Unit Nos. 3 and 5 shall be fired with natural gas and/or fuel oil equivalent to 1.1 lb. SO₂/MMBtu during the testing period. This temporary sulfur dioxide emissions restriction shall first apply when Orimulsion is initially burned in Unit No. 4. The restriction shall cease when FPL notifies the Department that the Orimulsion test has been completed, or within 18 months of the initial burning of Orimulsion, whichever shall occur first. The restriction shall

not apply during any period that Orimulsion burning is stopped for seven days or longer. The restriction shall be implemented by amendments to Air Operating Permits Nos. AO64-131230 and AO64-132060.

D. The research and testing ordered herein shall be conducted on FPL's Sanford Unit No. 4 Power Boiler. The research and testing shall be limited to 120 full-power burn days equivalent within the 18 month period beginning with the first orimulsion burn at Sanford No. 4.

E. FPL shall construct, perform monitoring, testing, and reporting in accordance with Air Construction Permit No. AC64-180842, to be separately issued for the testing and research ordered herein, and which modifies FPL's current operating permit for Sanford Unit No. 4, AO64-132055.

F. FPL shall collect any solid wastes generated by the Orimulsion-related test burn equipment and dispose of it off-site at a landfill approved by the Department.

G. As portions of this Order constitute a relaxation of the SIP, the Order shall be submitted to the Environmental Protection Agency pursuant to Section 110 of the Clean Air Act.

H. None of the provisions of this Order relieve FPL of the responsibility to comply with all other applicable emission limiting standards or ambient air quality standards.

I. Any condition contained in this Order which is different than any requirement established by rule, permit or certification condition, or Department order, shall be effective for no more than two years from the date of this Order.

J. This Order shall not be renewed.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Regulation in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department of Environmental Regulation.

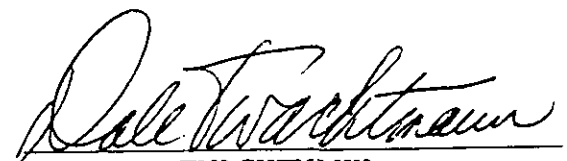
DONE AND ORDERED this 4th day of October, 1990
in Tallahassee, Florida.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk 10-10-90
Date

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


DALE H. TWACHTMANN
Secretary
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this ORDER AUTHORIZING RESEARCH AND TESTING and all copies were mailed before the close of business on 10-10-90.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant
to §120.52(9), Florida Statutes
with the designated Department
Clerk, receipt of which is
hereby acknowledged.

Lynne Taber
Clerk

10-10-90
Date

Copies furnished to:

William Green, Esq.
David Schwartz, Esq.
Dan Thompson, Esq.
Chuck Collins, CF District
Tom Hansen, EPA
Thomas Cloud, Esq.