



Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

April 25, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. M. P. Opalinski
Director of Environmental Affairs
Seminole Electric Cooperative Incorporated
16313 North Dale Mabry Highway
Tampa, Florida 33688

Re: Seminole Power Plants, Palatka, Units 1 and 2
Modification of Final Determination - PSD-FL-018(A), PA 78-10

Dear Mr. Opalinski:

The Department hereby amends the Conditions of Approval related to emissions, fuel use, recordkeeping and reporting in the subject Final Determination (dated August 13, 1979) pursuant to 40 CFR 52.21 - Prevention of Significant Deterioration (PSD Permit). The PSD permit is amended as follows:

D. FOR THE ELECTRIC UTILITY STEAM GENERATING UNITS WHEN BURNING COAL AND PETROLEUM COKE FUEL BLENDS

Stack emissions from Units 1 and 2 shall comply with the following conditions when burning blends of coal and petroleum coke:

Item 1 - Sulfur Dioxide (SO₂) Emissions

a) Unit 1:

$$E_{SO_2} = [(\%C_{HI} / 100) * (P_S) * (1 - (\%R_o / 100))] \\ + [(1 - (\%C_{HI} / 100)) * (0.74 \text{ lb SO}_2 / \text{MMBtu})] \quad (\text{Eqn. 1})$$

b) Unit 2:

$$E_{SO_2} = [(\%C_{HI} / 100) * (P_S) * (1 - (\%R_o / 100))] \\ + [(1 - (\%C_{HI} / 100)) * (0.72 \text{ lb SO}_2 / \text{MMBtu})] \quad (\text{Eqn. 2})$$

where:

E_{SO_2} = allowable SO₂ emission rate; pounds per million Btu heat input (lb SO₂/MMBtu),
30-day rolling average

$\%C_{HI}$ = percent of coal used on a heat input basis

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- P_S = potential SO_2 combustion concentration (unwashed coal without emission control systems) as defined by NSPS Subpart Da; lb SO_2 /MMBtu, 30-day rolling average
- $\% R_O$ = overall percent SO_2 reduction from Equation 19-21 of EPA Reference Method 19. Per NSPS Subpart Da, $\% R_O$ must not be less than 90%, 30-day rolling average
- 0.74 = historical 2-year annual average SO_2 emission rate for Unit 1; lb/MMBtu
- 0.72 = historical 2-year annual average SO_2 emission rate for Unit 2; lb/MMBtu

Compliance with the lb/MMBtu heat input emission limitations and percent reduction requirement shall be determined on a 30-day rolling average basis.

Item 2 - Nitrogen Oxide Emissions

- a) 0.60 lb/MMBtu heat input, and 35 percent of the potential combustion concentration (65 percent reduction). Compliance with the lb/MMBtu heat input emission limitation and percent reduction requirement shall be determined on a 30-day rolling average basis. Compliance with the 0.60 lb/MMBtu heat input emission limitation shall also constitute compliance with the 65 percent reduction requirement; and
- b) 0.50 lb/MMBtu heat input determined on an annual average basis, when subject to the 40 CFR §76.8 Early Election Program for Group 1, Phase II Boilers or in any year when petcoke is burned.

Item 3 - Particulate Matter Emissions

0.03 lb/MMBtu heat input, and one percent of the potential combustion concentration (99 percent reduction). Compliance with the 0.03 lb/MMBtu heat input emission limitation shall also constitute compliance with the 99 percent reduction requirement.

Item 4 - Carbon Monoxide Emissions

The Permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the units begin firing petroleum coke, test results demonstrating that the operational changes did not result in a significant emissions increase of the pollutant when compared to past emissions while firing coal. The carbon monoxide emissions shall be based on test results using EPA Method 10.

Item 5 - Sulfuric Acid Mist Emissions

The Permittee shall maintain and submit to the Department on an annual basis for a period of five years from the date the units begin firing petroleum coke, test results demonstrating that the operational changes did not result in a significant emissions increase of the pollutant when compared to past emissions while firing coal. The sulfuric acid mist emissions shall be based on test results using EPA Method 8.

Item 6 - Fuel Specifications

Fuels fired shall consist of coal and petroleum coke blends containing a maximum of 30 percent petroleum coke by weight. The maximum weight of the petroleum coke burned shall not exceed 186,000 pounds per hour (averaged over 24 hours). The petroleum coke sulfur content shall not exceed 7.0 percent by weight, dry basis.

Item 7 - Reporting and Recordkeeping

- a) Documentation verifying that the coal and petroleum coke fuel blends combusted in Units 1 and 2 have not exceeded the 30 percent maximum petroleum coke by weight limit specified by Condition of Approval, Section D, Item 6 shall be maintained and submitted to the Department's Northeast District office with each annual report; and
- b) The Permittee shall maintain and submit to the Department, on an annual basis for a period of five years from the date the units begin firing petroleum coke, data demonstrating that the operational change associated with the use of petroleum coke did not result in a significant emission increase pursuant to Rule 62-210.200(12)(d), F.A.C.

Item 8 - Handling of Petroleum Coke

All prior conditions of approval that address coal handling shall also apply to the handling of petroleum coke.

E. FOR THE ELECTRIC UTILITY STEAM GENERATING UNITS WHEN BURNING NO 2 FUEL OIL

Use of No. 2 fuel oil is authorized for startups, flame stabilization and required emergency electric reserve capacity. It is also authorized for normal continuous operation when coal quality, process conditions, and/or burner equipment prevent meeting demand with solid fuels only.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Sincerely,



Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/sa/hh

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- Complete items 3, 4a, and 4b.
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3. Article Addressed to

Mr. M. P. Opalinski
Seminole Electric Coop
Kc313 N. Dale Mabry Hwy
Tampa, FL 33688

4a. Article Number

P 265 659 199

4b. Service Type

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X William R. Shy

PS Form 3811, December 1994

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P 265 659 199

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PS Form 3800, April 1995

PSD-FL-018