

Best Available Control Technology (BACT) Determination

Orlando Utilities Commission

Orange County

The proposed facility is the construction of one 415 net megawatt coal-fired electric utility steam generating unit, one 92 million Btu per hour heat input oil-fired auxiliary boiler, and coal, limestone, and fly ash handling systems. The site is to be known as the Curtis H. Stanton Energy Center and is to be designed to accommodate four generating units. This determination is for Unit No. 1, the only installation proposed at this time.

Unit No. 1 will burn approximately 1.1 million tons per year of coal having an average sulfur content of 2.6 percent. The boiler will use No. 6 oil during start-ups, which will require an estimated annual oil usage of 80,000 gallons. The auxiliary boiler will be utilized to provide start-up and shut-down capability for Unit No. 1. The auxiliary boiler will operate an estimated 150 hours annually and consume 57,000 gallons per year of No. 2 oil having a sulfur content less than 0.5 percent.

The Energy Center is to be located approximately ten miles south-east of Orlando in Orange County. The area is classified nonattainment for the pollutant ozone (17-2.16(1)(g)F.A.C.), and attainment for all other pollutants. The facility must comply with the provisions of 17-2.04 F.A.C. (Prevention of Significant Deterioration).

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	0.03 lb/million Btu input
SO <sub>2</sub>	NAPS
NO <sub>x</sub>	0.60 lb/million Btu input

Particulate emissions to be controlled with a cold side Electrostatic Precipitator (ESP). Sulfur dioxide emissions to be controlled with a wet limestone flue gas scrubber. There is no specific technology to control NO<sub>x</sub> emissions, therefore, BACT is to be the manufacturer's guarantee for state-of-the-art burner design parameters to minimize NO<sub>x</sub> emissions.

Fugitive dust from the coal handling system will be controlled with bag filters, water sprays, and a telescopic chute. Fugitive dust from the limestone handling system will be controlled with bag filters, telescopic chute, pile compaction, and covered conveyors. Emissions from the fly ash vacuum type pneumatic transfer system will be controlled with a fabric filter baghouse. Dust generated by vehicle traffic over unpaved roads will be reduced by wetting with water or a dust palliative.

Date of Receipt of a BACT Application:

July 9, 1981

Date of Publication in the Florida Administrative Weekly:

July 24, 1981

Review Group Members:

Hamilton S. Oven, Jr. - Power Plant Siting Section  
Charles Collins - St. Johns River District  
Bob King - DER New Source Review Section  
Larry George - DER Air Modeling Section

The BACT determination reflects the recommendations from the review group.

BACT Determination by DER:

A. Steam generating Unit No. 1.

<u>Pollutant</u>	<u>Emission Limit - lb/10<sup>6</sup> Btu input</u>
Particulates	0.03
SO <sub>2</sub>	0.76 (30 day rolling average)
NO <sub>2</sub>	0.60 (30 day rolling average)
<del>CO<sub>x</sub></del>	<del>0.05</del>
Visible Emissions	Maximum 20% Opacity

Compliance with the allowable emission limits for Unit No. 1 will be demonstrated with performance tests conducted in accordance with the provisions of the NSPS subsections 60.46a, 60.48a and 60.49a.

B. Auxiliary boiler.

<u>Pollutant</u>	<u>Emission Limit - lb/10<sup>6</sup> Btu input</u>
Particulates	0.015
SO <sub>2</sub>	0.31
NO <sub>2</sub>	0.16
Visible Emissions	Maximum 20% Opacity

Page Three

Compliance testing will be in accordance with 17-2.23, F.A.C., method 9.

C. Coal, limestone, flyash handling systems.

<u>Pollutant</u>	<u>Emission Limit</u>
Particulates	Maximum 5% Opacity

Compliance testing will be in accordance with 17-2.23 F.A.C., DER method 9.

The fuel oil to be fired in Unit No. 1 and the auxiliary boiler will be "new oil", which means an oil which has been refined from crude oil and has not been used, and which may or may not contain additives.

Justification of DER Determination:

40 CFR 60, Subpart Da, Standards of performance for electric utility steam generating units for which construction is commenced after September 18, 1978, is determined as BACT for the proposed No. 1 unit. The proposed emission control equipment is state-of-the-art and determined as BACT.

BACT for particulate and SO<sub>2</sub> emissions from the auxiliary boiler is determined to be the firing of No. 2 fuel oil with a sulfur content less than 0.5 percent. The boiler has limited operation and the emissions are minor when compared to Unit No. 1. Therefore, no air pollution control equipment is warranted.

The coal, limestone and fly ash handling systems are exempted from mass emission rate compliance tests unless opacity limits are exceeded.

The term "new oil" is included to prevent the use of waste oil as fuel, emissions from which were not considered in this BACT analysis.

Details of the Analysis May be Obtained by Contacting:

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Recommended by:

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Steve Smallwood, Chief, BAQM

Date: 8/25/81

SS:caa

Approved by:

Victoria J. Tschinkel  
Victoria J. Tschinkel, Secretary

Date: 8/28/81