United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

APR - 4 2001

IN REPLY REFER TO:
FWS/R4/CRF

RECEIVED
APR 09 2001
BUREAU OF AIR REGULATION

Re: PSD-FL-306

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road, MS 48
Tallahassee, Florida 32399-2400

0490046-001-AC (South)
PSD-FL-306

Dear Mr. Fancy:

Our Air Quality Branch has reviewed the Prevention of Significant Deterioration Application for the South Pond Energy Park, a 600 MW power production facility in Hardee County, Florida. The facility would be located 135 km southeast of Chassahowitzka Wilderness, a Class I area, administered by the Fish and Wildlife Service.

The technical review comments from our Air Quality Branch are enclosed. Specifically, we recommend that your Department consider applying lower limits than proposed for nitrogen oxides emissions.

Thank you for giving us the opportunity to comment on this permit application. We appreciate your cooperation in notifying us of proposed projects with the potential to impact the air quality and related resources of our Class I air quality areas. If you have any questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at (303) 969-2617.

Sincerely yours,

Edwardw Loth

for Sam D. Hamilton
Regional Director

Enclosure

cc: C. Linc
C. Holladay
B. Thomas, SWD
K. Kaeky, Golder
G. Worley, EPA

Technical Review of Prevention of Significant Deterioration Permit Application
For the Construction of a 600 MW Power Production Facility
South Pond Energy Park
Hardee County, Florida
PSD-FL-306

by

Air Quality Branch, Fish and Wildlife Service – Denver
March 28, 2001

Constellation Power Source Company proposes to construct a 600 MW power production facility, South Pond Energy Park (South Pond). The facility would be located in Hardee County, Florida, 135 km southeast of Chassahowitzka Wilderness, a Class I area administered by the U.S. Fish and Wildlife Service (FWS).

This project will result in PSD-significant increases in emissions of nitrogen oxides (NO_X), sulfur dioxide (SO_2), sulfuric acid mist (SAM), particulate matter (PM-10), volatile organic compounds (VOC), and carbon monoxide (CO). Emissions (in tons per year – TPY) are summarized below.

POLLUTANT	EMISSIONS INCREASE (TPY)
NO_X	654
SO_2	145
SAM	15.1
PM-10	120
VOC	46
CO	346

Best Available Control Technology (BACT) Analysis

The proposed facility consists of three General Electric Frame 7FA turbines. One turbine will be a combined cycle/simple cycle unit for base/peak load service; the remaining two turbines will be operated in simple cycle mode for peaking service. During combined cycle operation, the first unit will use selective catalytic reduction (SCR) to control NOx to 3.5 ppm when firing gas and 15 ppm when firing oil. The simple cycle units will use dry low-NOx (DLN) and water injection to limit NOx to 9 and 42 ppm while firing gas and oil, respectively.

South Pond Proposed NO_x Limits

Natural Gas	
Simple Cycle (DLN)	9 ppm
Combined Cycle (SCR)	3.5 ppm
Oil	
Simple Cycle	42 ppm
Combined Cycle (Water Injection)	15 ppm

We agree that SCR meets the BACT criteria, however, we have found other similar sources that have been permitted for lower NO_x emissions using SCR during combined cycle operation. There are two sources with permitted levels of 2.5 ppm NO_x or lower, including Westbrook Power in Maine and the Sumas facility in Washington. While these sources are not yet operating, the New Source Review Workshop Manual states "a commercially available control option will be presumed applicable if it has been or is soon to be deployed (e. g., is specified in a permit) on the same or a similar source type." [1] South Pond could reduce annual emissions of NO_x by 28.2 tons by employing an emissions limit of 2.5 ppm NO_x. We believe that based on the two permits specifying NO_x limits on similar sources at or below 2.5 ppm, South Pond should further evaluate the costs of reducing NO_x below 3.5 ppm. We would also like South Pond to investigate the possibility of a lower NO_x limit while burning oil in combined cycle. CPV Gulf Coast in Florida has requested a permit that would limit NO_x at their facility to 10 ppm while burning oil.

Air Quality Related Values (AQRV) Analysis

The air quality and visibility analyses were performed appropriately.

South Pond used the CALPUFF model with CALMET meteorological data (1990) to evaluate potential impacts to air quality at Chassahowitzka. The modeling results predicted that impacts from the proposed project would be below the significant impact levels for all Class I increments.

South Pond used the CALPUFF model with CALMET meteorological data (1990) and CALPOST to evaluate potential impacts to visibility at Chassahowitzka. The maximum predicted change in light extinction was 3.71%, less than the 5% recommended threshold for visibility impacts. The maximum predicted change assumed a worst-case scenario of all three units burning fuel oil in simple cycle mode.

In conclusion, the South Pond project is not expected to significantly impact air quality or visibility at Chassahowitzka.

Contact: Ellen Porter, Air Quality Branch (303) 969-2617.

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[1] New Source Review Workshop Manual, EPA, 1990, p. B.18.