Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

February 9, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. Michael Kennedy, Manager
Florida Power Corporation
3201 34th Street, South
St. Petersburg, Florida 33711

Dear Mr. Kennedy:

Re: File No. 0170004-003-AC

The enclosed document is a facsimile copy of comments on the proposed petroleum coke project at the Crystal River Power Plant from the National Park Service. Your response to these comments were requested in item six of our letter dated January 24, 1996. This additional information and the information requested in the January 24, 1996 letter are needed before your request can be processed.

The Department will resume processing your application after receiving all the requested information. If you have any questions on this matter, please call Edward Svec at (904)488-1344.

Sincerely,

A. A. Linero, P.E.
Administrator
New Source Review Section
Bureau of Air Regulation

AAL/es/t

Enclosure

cc: J. Kissel, SWD

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

IN REPLY REFER TO:

FEB 07 1996

Mr. Clair Fancy
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Fancy:

We have reviewed information submitted by Florida Power Corporation (FPC) regarding the proposed modification of operating permits for its Crystal River Plant. FPC is proposing to blend petroleum coke with the current fuel, low sulfur coal, at Units 1 and 2. This would result in an increase in sulfur dioxide (SO2) emissions of 9,357 tons per year (TPY) from the facility. The EPA Aerometric Information Retrieval System lists current facility SO2 emissions of 86,773 TPY; future facility SO2 emissions would therefore total 96,130 TPY. The Crystal River Plant is 21 km north of Chassahowitzka Wilderness Area, a Class I air quality area, administered by the Fish and Wildlife Service.

In the enclosed Technical Review Document we summarize our concerns regarding this project. We ask that FPC be required to submit information supporting the conclusion that new source review is not applicable to the project. If FPC cannot supply this information, we ask that you require FPC to undergo new source review, including a best available control technology analysis, an air quality modeling analysis, and an air quality related values (AQRV) analysis. Because of the magnitude of the emissions increase and the proximity of the Class I area, we ask that even if new source review is not applicable, you require FPC to assess potential impacts from this project and all area sources to Class I AQRVs, including lichens and visibility.

If you have any further questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at 303/969-2617.

Sincerely yours,

For Noreen K. Clough
Regional Director

Enclosure

The Crystal River facility was in operation before the major source baseline date (1977) for Prevention of Significant Deterioration Class I SO2 increment consumption. Emissions from facilities permitted before that date do not consume Class I SO2 increment; they are part of the baseline concentration. The permitted SO2 emission rate for the Crystal River facility has been lowered since the baseline date and, therefore, the facility has actually made SO2 increment available. In addition, the facility's actual SO2 emission rate is lower than its permitted emission rate. And, even with the proposed emissions increase, the actual SO2 emission rate will remain lower than the permitted emission rate.

In the past, the Florida Department of Environmental Protection (FDEP) has used FPC's permitted SO2 emission rate instead of the lower actual emission rate when modeling increment consumption. Therefore, because the actual emission rate will still be lower than the permitted emission rate, increment consumption will not increase as a result of this modification.

Air Quality Related Values (AQRV) Analysis

As mentioned above, FPC did not perform an AQRV analysis. We believe that an emissions increase of over 9,000 TPY of SO2 near the Class I area is significant and warrants an AQRV analysis, even if new source review is not required. As noted above, the estimated high 24-hour SO2 impact from FPC alone is 37 ug/m3. We have recently identified 3 species of lichens in Chassahowitzka that are classified as "sensitive" to SO2: Parmotrema reticulatum, Ramalina americana, and Usnea strigosa. Sensitive species can be affected by SO2 concentrations below 50 ug/m3, and are usually absent at levels above 50 ug/m3 (annual mean). LeBlanc (1972) found that some lichen species were sensitive to average SO2 levels as low as 13 to 26 ug/m3.

We ask that you require FPC to estimate cumulative SO2 concentrations at Chassahowitzka WA, modeling emissions from the proposed modification in addition to emissions from all area sources. In addition, if ambient SO2 monitoring data is available from the Crystal River site, we ask that FPC provide us with SO2 annual means, 1-hour maxima (1st- and 2nd-high), 3-hour maxima (1st- and 2nd-high), 24-hour maxima (1st- and 2nd-high), and 24-hour means for the last 5 years. With this information we will evaluate the potential for adverse impacts to lichens at the Class I area.

We also ask that FPC be required to evaluate potential visibility impacts in Chassahowitzka WA from the proposed project. FPC should perform a VISCREEN analysis for visible plumes and a regional haze analysis. We ask that FPC use a background visual range of 65 km for the wilderness area, a value which represents the 90th percentile annual visual range.

Contact: Ellen Porter
(303) 969-2617

Reference: LeBlanc, F., D.N. Rao, and G. Comeau. 1972. The epiphytic vegetation of Populus balsamifera and its significance as an air pollution indicator in Sudbury, Ontario. Can. J. of Botany, vol. 3: 519-528.

Technical Review of the Permit Modification Application for Florida Power Corporation's Crystal River Plant Citrus County, Florida

by

Air Quality Branch, U.S. Fish and Wildlife Service, Denver, Colorado

Florida Power Corporation (FPC) is requesting a modification of current operating permits for its Crystal River Units 1 and 2. FPC is proposing to blend petroleum coke (4.5 % S) with the coal (1.1 % S) currently being burned in these units to achieve a fuel ratio of 5 percent coke to 95 percent coal. The Crystal River facility presently has 4 coal-fired units, Units 1, 2, 4, and 5 (Unit 3 is nuclear-powered), which emit a total of approximately 86,773 tons per year (TPY) sulfur dioxide (SO2) (data obtained from the EPA Aerometric Information Retrieval System). The proposed fuel change would result in a emissions increase of 9,357 TPY of SO2. Total SO2 emissions from the facility would be 96,130 TPY, making it one of the largest SO2 emitters in Florida. The Crystal River facility is located approximately 21 km north of Chassahowitzka Wilderness Area (WA), a Class I air quality area administered by the U.S. Fish and Wildlife Service.

New Source Review Applicability

FPC maintains in its application that no physical changes or changes in the method of operation will occur at Units 1 and 2 and, therefore, new source review will not be applicable for this permit change. Because of this, FPC did not perform the analyses required by new source review, including a best available control technology analysis, an air quality modeling analysis, and Class I increment and air quality related values (AQRV) analyses. We ask that FPC be required to provide detailed information supporting their conclusion that new source review does not apply to this permit modification. If they cannot provide this information, we ask that FPC be required to undergo new source review and perform the associated analyses.

Best Available Control Technology (BACT) Analysis

No BACT analysis was done.

Air Quality Modeling Analysis

We estimated potential air quality impacts at Chassahowitzka WA from the 9,357 TPY SO2 increase, using the EPA ISCST2 model. For this modification alone, the 24-hour SO2 impact at the Class I area is 3.6 micrograms per cubic meter (ug/m3). For the entire facility, which would emit approximately 96,130 TPY SO2, the 24-hour impact at Chassahowitzka WA would be 37.0 ug/m3. We are concerned that SO2 concentrations at Chassahowitzka WA are approaching, or exceed, concentrations at which some AQRVs may be affected (see "Air Quality Related Values (AQRV) Analysis", below). We ask that FPC be required to model cumulative SO2 impacts to Chassahowitzka WA, so that we can evaluate potential impacts from all area sources to air quality and AQRVs at the Class I area.

Class I Increment Analysis

Even though the FPC modification would result in a large SO2 emissions increase, Class I SO2 increment consumption will not be affected, for the reasons given below. Therefore, no further increment analysis is required of FPC.

cc:
Ms. Jewel Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxic Management Division
U.S. EPA, Region 4
345 Courtland Street, NE.
Atlanta, Georgia 30365

bcc:
FWS-REG 4: AQC
CHASS:Refuge Manager
AQD-DEN: Ms. Ellen Porter
National Park Service - AIR
P.O. Box 25287
Denver, CO 80225

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3. Article Addressed to:
Mr. J. Michael Kennedy, Manager
Florida Power Corporation
3201 34th Street, South
St. Petersburg, FL 33711

0170004-003-AC

4a. Article Number
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4b. Service Type
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[signature]

PS Form 3811, December 1991 ☆U.S.GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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PS Form 3800, March 1993

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

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FEB 09 1996
BUREAU OF
AIR REGULATION

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