United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

IN REPLY REFER TO:

December 27, 1993

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 the Prevention of Significant Deterioration Application for the proposed sulfuric acid (H_2SO_4) plant expansion at Cargill Fertilizer, Inc., Riverview, Florida. The facility is located approximately 85 km southeast of the Chassahowitzka Wilderness Area (WA), a Class I air quality area administered by the U.S. Fish and Wildlife Service.

We find the application to be incomplete. Our comments on the Best Available Control Technology (BACT) analysis and the Air Quality Related Values (AQRVs) analysis are below. Our comments on the air quality modeling analysis will be submitted the first week of January, per our December 16 conversation with Mr. Cleve Holladay of your Bureau of Air Regulation.

Control Technology Analysis

The BACT analysis performed by Cargill is incomplete. The application should list the available control technologies and their associated control efficiencies. Documentation, including actual cost data, should be provided for control technologies that Cargill considers to be economically infeasible. Cargill should conduct a top-down BACT analysis, with supporting documentation to demonstrate that better controls than the New Source Performance Standards (NSPS) would be economically infeasible, when compared to control costs at other acid plants.

The analysis cites the EPA's 1979 NSPS study and uses the study as justification for eliminating control technologies. The study is over a decade old, and should not be used as justification for eliminating technologies, since technologies and costs change over time. The NSPS is to be used as a baseline for BACT, and BACT is often more stringent than the NSPS.

Cargill justifies their failure to consider control options by citing the predicted low ambient air quality impacts of the proposed project. The EPA's New Source Review Workshop Manual (1990) cautions against confusing the environmental impact analysis with the air quality impact analysis. The Manual states that the fact that a given control alternative would result in only a slight decrease in ambient concentrations of the pollutant, when compared to a less stringent control alternative, should not be viewed as an adverse environmental impact, thus justifying rejection of the more stringent control alternative (page B.46). It is inappropriate to consider ambient impacts in the BACT analysis.

Air Quality Related Values Analysis

Cargill did not analyze potential impacts to AQRVs, other than visibility, at Chassahowitzka WA. Maximum predicted impacts from the expansion exceeded recommended sulfur dioxide (SO_2) Class I significant impact levels for the 3-hr and 24-hour time periods. The maximum predicted 3-hr SO_2 impact is 1.31 $\mu g/m^3$; the recommended Class I 3-hr SO_2 significance level is 0.48 $\mu g/m^3$. The maximum predicted 24-hr SO_2 impact is 0.27 $\mu g/m^3$; the recommended Class I 24-hr SO_2 significance level is 0.07 $\mu g/m^3$. Cargill's modeling analysis predicted 58 violations of the Class I 3-hr SO_2 increment and 158 violations of the Class I 24-hr SO_2 increment. Although Cargill's modeling analysis predicted that the proposed project would not contribute significantly to a SO_2 increment violation, it would contribute significantly to increment consumption.

We are concerned that Cargill's significant contribution to SO_2 increment consumption is also significantly contributing to impacts on AQRVs. Chassahowitzka WA contains upland freshwater wetlands that in certain areas have a thin veneer of organic soil over a porous limestone base. Acidic deposition, before it is neutralized by the underlying limestone, may oxidize and erode this soil with subsequent effects to vegetation and invertebrates living on or in the soil. Loss of this soil would seriously alter and impair the function of the wetland ecosystem.

We remind FDER that EPA has deferred to the Federal Land Manager (FLM) to determine the need for full assessment of impacts on AQRVs in a Class I area. We have determined that such an assessment is necessary because of the significant consumption of SO_2 Class I increment at Chassahowitzka WA.

We ask that FDER require Cargill to investigate, in cooperation with the U.S. Fish and Wildlife Service, the sensitivity to acidity of upland organic soils in the wilderness area. Soils should be analyzed for pH, sulfur content, oxidation/reduction potential, and soil depth and color. If this information indicates that the soils are susceptible to oxidation and erosion by sulfate, then further investigation should determine the level of acidic loading to the

system at which the soils are protected. This information is necessary if the FLM is to make an informed decision regarding PSD permit applications, which may affect Chassahowitzka WA.

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 questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at 303/969-2071.

Sincerely yours,

for James W. Pulliam, Jr.
Regional Director

cc:
Jewell Harper, Chief
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Air, Pesticides and Toxic Management Division
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