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MAY 24 1991

Division of Air
Resources Management

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

Dear Mr. Fancy:

We have completed our review of the CF Industries (CFI) permit application and your Technical Evaluation and Preliminary Determination Document (TEPDD) regarding CFI's proposed expansion of Sulfuric Acid Plants "C" and "D" at their Plant City, Florida, phosphate fertilizer facility. The Plant City facility is located approximately 70 km southeast of the Chassahowitzka Wilderness Area, a class I air quality area administered by the U.S. Fish and Wildlife Service.

The Chassahowitzka National Wildlife Refuge was established in 1943 for the purpose of migratory bird conservation. The refuge provides habitat for a number of federally threatened and endangered species including the American alligator, bald eagle, eastern brown pelican, eastern indigo snake, Florida manatee, and three species of sea turtle. Our comments on the best available control technology (BACT), air quality, and air quality related values (AQRVs) analyses with respect to the proposed project's potential impacts on the Chassahowitzka Wilderness Area are discussed below. We ask that you consider these comments before making a final determination regarding the proposed project.

The primary emission increases associated with the proposed project are a 292 tons per year (TPY) increase in sulfur dioxide (SO₂) and an 11 TPY increase in sulfuric acid mist (H₂SO₄). Regarding the BACT analysis, we agree that the dual absorption process and use of high efficiency mist eliminators represent BACT to minimize emissions of SO₂ and H₂SO₄, respectively.

For the air quality analysis, CFI did not model the impacts of the proposed emissions on the Chassahowitzka Wilderness Area because predicted concentrations near the plant site were "insignificant." They incorrectly concluded that no further air quality modeling was required. We are pleased to see that you acknowledged that there are no PSD significant impact levels for class I areas. We are also pleased that you evaluated

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the impacts on the wilderness area from all increment-consuming sources. However, as we indicated in past permit reviews, in order for us to assess potential impacts on sensitive AQRVs, it is important for us to know the total ambient concentrations (increment plus background) at the class I area. Other plants in the vicinity of the wilderness area may not consume PSD increments, but nevertheless they contribute to background pollution levels.

We are becoming increasingly concerned about the cumulative impact of these emissions on resources, such as lichens and bryophytes, that are known to be particularly sensitive to SO₂. We are also concerned about the potential acidification of surface water in the wilderness area due to increased sulfur deposition. Acidification could have serious implications not only for the invertebrates and fish that would be directly affected, but also for species higher up the food chain that depend on them for food, species such as the alligator, pelican, and bald eagle. Therefore, the air quality analysis for the CFI project should be taken one step further and the total pollution impact levels at the Chassahowitzka Wilderness Area should be provided to us so that we can assess potential impacts on sensitive resources.

Also, in Section e of your TEPDD, you conclude that because the impacts from the proposed project are predicted to be less than PSD significance levels, no harmful effects on soils and vegetation are expected. This is not necessarily true. As you acknowledged in Section d, there are no PSD significant impact levels for class I areas. The reason for this is that if the threshold concentration for effects on sensitive resources is being approached, it is possible that a significant impact could occur at a concentration of less than predetermined significant levels. In addition, once the effects threshold is actually reached, any increase in concentrations may be considered "significant."

The results of the cumulative increment analysis that you performed show that the contributions of the proposed CFI modification would be small. However, the reported 24-hour and annual concentrations are questionable because the annual impact is greater than the 24-hour impact, which is not possible. In addition, 72 percent of the annual and 24-hour averages, and 51 percent of the 3-hour average, class I SO₂ increment would be consumed at the Chassahowitzka Wilderness Area. It is important that all increment-consuming sources be included in the analysis because the allowable increments are being approached. Therefore, we request that you provide us with a list of the sources, along with appropriate emissions, stack parameter, and source location information, that was included in your analysis, so that we may perform independent modeling analyses.

Finally, CFI did not perform a visibility modeling analysis to assess potential impacts at the Chassahowitzka Wilderness Area. However, based on the results of a visibility analysis performed by our Air Quality Branch using the VISCREEN model, the proposed emissions would have low potential for visibility impairment due to plume impacts in the wilderness area.

We will await the additional information requested above. In the meantime, if you have any questions regarding this matter, please contact John Bunyak of our Air Quality office in Denver at (303) 969-2071.

Sincerely,

for Ly Berry

Wilbur N. Ladd, Jr.
Assistant Regional Director
Refuges and Wildlife, Region 6

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