



Florida Department of Environmental Protection

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March 1, 2007

Electronically sent – Received Receipt requested.

hmorris@cfifl.com

Mr. Herschel Morris, General Manager
Vice President Phosphate Operations
CF Industries, Inc.
Post Office Drawer L
Plant City, Florida 33567-9007

Re: Request for Additional Information
DEP File No. 0570005-023-AC
Best Available Retrofit Technology (BART) Review

Dear Mr. Morris:

On January 31, 2007 we received your application for an air construction permit to incorporate Best Achievable Retrofit Technology (BART) requirements for several emissions units at the Plant City Phosphate Complex in Hillsborough County.

Pursuant to Rules 62.296.340 (2), 62-4.055, and 62-4.070 F.A.C., Permit Processing, the Department requests submittal of the additional information prior to processing the application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

SULFURIC ACID PLANTS (SAPS) A, B, C, AND D

1. As indicated in your BART application, a Prevention of Significant Deterioration (PSD) application was submitted and currently a PSD- Best Available Control Technology (BACT) review is being conducted by the Department to increase production for Plant B. The BART review for SAP B will be coordinated to the extent feasible with the BACT analysis for the same unit.
2. The BACT/BART evaluations for SAP B will be taken into consideration when evaluating BART for SAP A, SAP C and SAP D while considering differences in processes between the plants.
3. Please reconsider the relatively high BART SO₂ limits proposed for plants A and B in view of the fact that they are greater than the NSPS values set in the early 1970's for new SAPs. Reconsider as well the averaging periods.
4. Submit a flow diagram of each plant showing the current control technology in use.

5. Please provide sulfur dioxide CEM data summary (lb/ton of 100% H₂SO₄) for all the sulfuric acid plants (SAPs) for the year 2006. For SAP B, also include data for year 2005. The averaging time should be 24 hours as well as 3 hours. The two averaging time should be depicted in different colors. In providing this data, please present it in a graphical representation against time. On the same graph indicate the production rates for the plants and indicate the turnaround date, if any, for the SAPs on the time axis. A different graph should be made for each of the four SAPs.
6. The application presents different available SO₂ abatement methods. One of the methods is tail-gas scrubbing in conjunction with double absorption. Hydrogen peroxide scrubbing has been employed at SAPs. In research done by the Department, Outokumpu Technology (reference: www.outokumputechnology.com) provides a similar process called Peracidox process, which they claim to have low investment costs. Please provide cost analysis in using that system for further abatement of SO₂ emissions.
7. Provide sulfur dioxide (SO₂) and nitrogen oxides (NO_x) stack emissions tests for 2005-2006 for all SAP plants.
8. Complete Tables 5-3, 5-4 and 5-5 to include tons per year (TPY) of pollutant removed and cost per ton of pollutant removed in \$/ton.
9. No BART analysis for NO_x was included. No emission test data were included. What emission limit are you proposing? Was any NO_x emission limit considered in the modeling? Provide actual test reports to support the NO_x emission estimates used for the SAPs. Please submit a BART analysis and a NO_x emission limit for each plant.
10. Please provide a copy of the vendor quote used in the economic analysis for each of these plants.

DIAMMONIUM PHOSPHATE/MONOAMMONIUM PHOSPHATE (DAP/MAP) PLANTS
A, X, Y, AND Z

11. For each DAP/MAP plant subject to BART, you are required by Rule 62-296.340, F.A.C., to conduct an analysis of emissions control alternatives. This step includes the identification of available, technically feasible retrofit technologies, and for each technology identified an analysis of the cost of compliance, the energy and non-air quality environmental impacts, and the degree of visibility improvement in affected Class I areas, resulting from the use of the control technology. Please provide this information to the Department for each affected plant.
12. If a determination is made after doing the above analysis that the BART eligible DAP/MAP plant has controls already in place that constitute the most stringent controls available, then please provide emissions data for the affected BART pollutant. The emissions data information can be in the form of continuous emissions monitoring data or stack tests.
13. Permits for these plants have a PM enforceable limit to exempt the plants from RACT regulations. Please submit particulate matter (PM/PM₁₀) emission data for the last 2 years of operation for each DAP/MAP plant. Resubmit a proposed BART PM emission limit (lb/ton P₂O₅) for each plant and specify the control technology chosen.
14. Submit a flow diagram of each plant showing the current control technology in use.

MODELING

15. Table 2-3 in the BART application lists 24-hour average emission rates for the BART eligible emissions units for the CF facility. Some of these emission rates are taken from an insufficient PSD application that is currently being reviewed by the Department. According to the modeling protocol, source emission rates should be based on CEM data as a first priority. Please use emission rates that are based on your current operations, not based on future possible permit limits.
16. If upon further review, it is determined that the SAPs emit meaningful amounts of NO_x, then modeling analyses will also be required.
17. Section 5-16 of the BART application states that the SO₂ emission rate for SAP D will be reduced to 38.4 lb/hr. However, 37.8 lb/hr was modeled. Please correct.

We will forward any comments received from other agencies as soon as we receive them. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please advise the professional engineer to make sure he/she uses the correct seal in compliance with the applicable requirements of the Florida Board of Professional Engineers.

Permit applicants are advised that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days. If there are any questions, please call Teresa Heron at 850/921-9529. Matters regarding modeling issues should be directed to Debbie Nelson at 850/921-9537.

Sincerely,



A.A. Linero, Program Administrator
Bureau of Air Regulation
Permitting South

AAL/th

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