

Department of Environmental Protection

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

David B. Struhs Secretary

December 26, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike Daigle, General Manager IMC Phosphates MP Inc. Post Office Box 2000 Mulberry, Florida 33860

Re: DEP File No. 1050059-036-AC; PSD-FL-325

Sulfuric Acid Production Increase

New Wales Plant

Dear Mr. Daigle:

The Department has received the above referenced application on November 27, 2001, for the New Wales Plant in Polk County. Based on our initial review of the proposed project, we have determined that additional information is needed in order to continue processing this application package. Please submit the information requested below to the Department's Bureau of Air Regulation:

- 1. The annual SO₂ significant impact modeling submitted with this application used the higher short-term allowable 3 and 24-hour emission rates given in Table 3-1 as current rates (input as negatives) instead of the lower actual annual hourly emission rates. These lower rates should be compared with the proposed maximum emission rates in an annual significant impact analysis. For example the annual hourly emission rate of 398 lb/hr for SAD1 should be used as the current input value instead of 483.3 lb/hr. Please redo the annual significant impact modeling using the corrected inputs.
- 2. Rule 62-212.400(5)(h) 5, F.A.C. requires the applicant to provide information relating to the air quality impact of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Please provide this information.
- 3. In addition to the modeling questions above, the USFWS sent the attached correspondence. Please address their concerns
- 4. Please provide emissions data for SO₂ in lb/ton of 100% H₂SO₄ for the last two years (monthly CEM averages) of operation for all the five Sulfuric Acid Plants (SAP's). In providing this data, please present it in a graphical representation against time. On the same graph, indicate the

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production rate for the plant (monthly averages) and indicate the turn-around date for all five SAP's on the time axis.

- 5. Indicate what modifications were done to each plant during the turn-around. If catalysts were screened or replaced, indicate which conversion passes were selected for catalyst screening and/or replacement. Indicate the amount of catalyst replaced, if any.
- 6. Please provide emissions data for acid mist in lb/ton of 100% H₂SO₄ for the last two years of operation for all the five SAP's.
- 7. Please indicate the use for the additional sulfuric acid. Is the acid is being used to increase the actual production in the Phosphoric Acid plants or other downstream units? Please provide an accounting summary of the past and future sulfuric acid utilization for the facility.
- 8. Table 3-1 of the application states that the actual operating rate for all five SAP was 120.8 tons per hour. Please provide documentation to show that the actual operating rate for all five plants was in fact 120.8 tph.
- 9. Table 3-1 does not list the proposed operating rate in tph for each of the five plants. Please verify if the production increase for each plant is from 2900 tpd to 3400 tpd.
- 10. In corroborating the actual sulfur dioxide emissions from SAP 1, 2 and 3 as listed in Table 3-2 with the Department's ARMs database, their exists a discrepancy. Please submit the AOR's for the three plants for 1999 and 2000.
- 11. Please indicate the extent of work required in replacing the interpass absorber. Will there be a like-kind replacement. How long will it take to replace the interpass absorber?
- 12. The application alludes to the SO₂ concentration in the gas stream leaving the sulfur burner was in the range of 9.0-9.5 percent at the time the NSPS was adopted, but in recent years, the SO₂ concentration has been increased to 11.5-11.7 percent to optimize a plant capacity. Please indicate when the SO₂ concentration was increased to 11.5-11.7 percent for the five SAP's. What effect in terms of production of sulfuric acid and actual emissions of SO₂ did it have on the five SAP's when compared to the 9.0-9.5 percent SO₂ concentration.
- 13. The application alludes to the changes in the composition of the vanadium/sodium/potassium catalyst and in the physical shape of the catalyst; from a pellet (4 and 6 mm in diameter by 8-15 mm long) to a ring-type structure. Please indicate when these changes took place in the five SAP's. What effect in terms of production of sulfuric acid and actual emissions of SO₂ did it have on the five SAP's with this change.
- 14. Please provide cost analyses in \$/ton of SO₂ and acid mist removed by using ammonia scrubbing with double absorption plants.
- 15. Please provide the actual starting date (month) of the maintenance activities for each of the five SAP's. Also, indicate which tower replacements will be with the addition of heat recovery systems. The response to this can be submitted under a separate cover.
- 16. In making an evaluation as to whether a change can be considered "routine" maintenance, repair or replacement under the PSD program, EPA considers the factors of nature, extent, purpose, frequency, and cost, as well as any other relevant facts. Please provide the following

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information concerning the proposed schedule for equipment maintenance, upgrade and/or replacement:

Nature

- Whether major components of a facility are being modified or replaced; specifically, whether the units are of considerable size, function, or importance to the operation of the facility, considering the type of industry involved
- Whether the source itself has characterized the change as non-routine in any of its own documents
- Whether the change could be performed during full functioning of the facility or while it was in full working order
- Whether the materials, equipment and resources necessary to carry out the planned activity are already on site

Extent

- Whether an entire emissions unit will be replaced
- Whether the change will take a significant time to perform
- Whether the collection of activities, taken as a whole, constitute a non-routine effort, notwithstanding that individual elements could be routine
- Whether the change requires the addition of parts to existing equipment

Purpose

- Whether the purpose of the effort is to extend the useful life of the unit; similarly, whether the source proposes to replace the unit at the end of its useful life
- Whether the modification will keep the unit operating in its present condition, or whether it will allow enhanced operation (e.g., will it permit increased capacity, operating rate, utilization, or fuel adaptability)

Frequency

• Whether the change is performed frequently in a typical unit's life

Cost

- Whether the change will be costly, both in absolute terms and relative to the cost of replacing the unit
- Whether a significant amount of the cost of the change is included in the source's capital expenses, or whether the change can be paid for out of the operating budget (i.e., whether the costs are reasonably reflective of the costs originally projected during the source's or unit's design phase as necessary to maintain day-to-day operation of the source)

Any additional comments from EPA and the U.S. Fish and Wildlife Service will be forwarded to you after we receive them.

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The Department will resume processing this application after receipt of the requested information. 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. A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days.

Please note that in accordance with Rule 62-4.055(1), "The applicant shall have **ninety days** after the Department mails a timely request for additional information to submit that information to the Department........ Failure of an applicant to provide the timely requested information by the applicable date **shall** result in denial of the application."

We will be happy to meet and discuss the details with you and your staff. Mr. Syed Arif, P.E. is responsible for the technical review of the application. He may be contacted at 850/921-9528. You may discuss the modeling requirements with Mr. Cleve Holladay at 850/921-8689.

Sincerely,

A.A. Linero, P.E. Administrator New Source Review Section

AAL/sa Enclosure

cc: G. Worley, EPA

- J. Little, EPA
- J. Bunyak, NPS
- B. Thomas, DEP-SWD
- J. Koogler, Ph.D., P.E. Koogler & Associates



U.S.FISH&WILDLIFE SERVICE AIR QUALITY BRANCH

NPS AIR RES DIV

P.O. BOX 25287, Denver, CO 80225-0287

Date: December 21, 2001

Telephone: (303) 969-2617

Fax: (303) 969-2822

To:

12/21/01

Cleve Holladay

From: Ellen Porter

Subject: IMC Phosphates (PSD-FL-325)

The Class I analyses for IMC Phosphates proposed modification of their sulfuric acid plants at the New Wales Plant are incomplete. IMC did not follow the Federal Land Managers AQRV Workgroup guidance (FLAG - in effect since spring 2001) or consult with the U.S. Fish and Wildlife Service on the project. IMC incorrectly used background visibility values that pre-date FLAG guidance and are no longer accepted. IMC should evaluate the project's contribution to haze at Breton according to the recommendations of FLAG, which can be found at:

http://www2.nature.nps.gov/ard/flagfree/index.htm

In addition, the U.S. Fish and Wildlife Service is now recommending that applicants, after consultation with FWS, perform a deposition analysis and compare predicted impacts to the deposition analysis thresholds. These thresholds are found on the FLAG website.

Thank you for giving us the opportunity to comment on this project.

Complete items 1, 2, and 3. Also complet item 4 if Restricted Delivery is desired. Print your name and address on the rever so that we can return the card to you. Attach this card to the back of the mailpie or on the front if space permits.	c/signature Agent Address
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Mr. Mike Daigle General Manager IMC Phosphates MP Inc. P. O. Box 2000 Mulberry, FL 33860	3. Service Type Certified Mail ☐ Express Mail ☐ Registered ☐ Return Receipt for Merchandis
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