STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit

Mr. Phong T. Vo
U.S. Agri-Chemicals Corporation
3225 State Road 630 West
Ft. Meade, Florida 33841

DEP File No. 1050051-009-AC
PSD-FL-278

Enclosed is the FINAL Permit Number PSD-FL-278 for increasing the production rates of sulfuric acid and phosphoric acid plants at the existing Ft. Meade facility in Polk County. This permit is issued pursuant to Chapter 403, Florida Statutes and in accordance with Rule 62-212.400., F.A.C. - Prevention of Significant Deterioration(PSD).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/6/01 to the person(s) listed:

Phong T. Vo, USAC*
Gregg Worley, EPA
John Bunyak, NPS
Jerry Kissell, SWD
Jerry Campbell, HCEPC
John Koogler, P.E., K & A

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) (Date) 2/6/01

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Phong T. Vo
Gen. Mgr. of Eng. & Tech Services
US Agri-Chemicals Corp.
3225 State Rd. 630 West
Ft. Meade, FL 33841

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* | B. Date of Delivery: 2-8-01

C. Signature: X [signature] ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
7099 3400 0000 1449 4000

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To: Phong T Vo

Postage	$ 1.53
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Name (Please Print Clearly) (to be completed by mailer): Phong T Vo
Street, Apt. No.; or PO Box No.: 3225 State Rd 630 W
City, State, ZIP+4: Ft Meade FL 33841

PS Form 3800, July 1999 See Reverse for Instructions

7099 3400 0000 1449 4000

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C. Signature
X [signature] ☐ Agent ☐ Addressee

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If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
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U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Phong T Vo

Postage $ 2.15 Aug
Certified Fee
Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

Postmark Here

Name (Please Print Clearly) (To be completed by mailer)
Phong T Vo
Street, Apt. No.; or PO Box No.
3225 State Rd 630 W
City, State, ZIP+4
Ft Meade FL 33841

PS Form 3800, July 1999 See Reverse for Instructions

7099 3400 0000 1449 4000

FINAL DETERMINATION

U.S. Agri-Chemicals Corporation

Permit No. 1050051-009-AC, PSD-FL-278

Ft. Meade Chemical Plant

An Intent to Issue an air construction permit to U.S. Agri-Chemicals (USAC) Corp. to increase the sulfuric acid and phosphoric acid production capability within the complex in Polk County, was distributed on November 1, 2000. The Notice of Intent was published in the Lakeland Ledger on December 21, 2000. Copies of the draft construction permit were available for public inspection at the Department offices in Tampa and Tallahassee.

Comments from the U.S. Fish and Wildlife were received and addressed during the application review period. No additional comments were received during the public comment period following issuance of the Draft Permit.

The only comment during the 30-day public comment period was from EPA. The comment is as follows:

In its letter dated December 15, 2000, EPA comments that although no ambient air quality standard or PSD increment exists for F, the applicant must still address the requirement for pre-construction monitoring of F. This is in direct accordance with Florida Rule 62-212-400(5)(f). A de minimis concentration has been specified for F (see Table C-3 of EPA's New Source Review Workshop Manual) above which pre-construction monitoring would typically be required. The applicant needs to model the proposed increase in F emissions and compare the predicted impact to the de minimis level to determine whether or not pre-construction monitoring will be required. Also the applicant must address the additional impacts on soils, vegetation, wildlife, and visibility with respect to F.

Department's response:

The Department has not specified an ambient monitoring method for fluorides. Also the Department does not have assessment techniques to make quantitative predictions of additional fluoride impacts on soils, vegetation, wildlife, and visibility.

The present project is an increase in the production of phosphoric acid. The monitoring data submitted by USAC indicate 75 percent of the fluoride lab results below detection level. The monitoring data was collected from 1996 onwards in conjunction with their Gyp Stack expansion. As the current ambient fluoride concentration levels are mostly below detection levels and as actual emissions will likely remain unchanged, no increase in impacts is likely.

The Department will require additional ambient monitoring of fluorides in order to assess the impacts from this modification. The applicant and its consultant have agreed to provide one year of data and consequently an additional specific condition is being

added to the permit requiring collection of data. The new specific condition 23 will read as follows:

"The permittee shall submit for a minimum period of one year additional ambient fluorides monitoring data. The samples collection shall follow the protocol as described in Koogler & Associate's letter of January 26, 2001. The data gathering shall begin from the initial performance test and shall include additional twelve monthly data points. The last data shall be collected at the time of the first annual compliance test. Emission units 005 and 020 shall be operating at permitted capacity concurrently during the initial performance test and the first annual compliance test. A total of a minimum of fourteen (14) data points shall be submitted to the Bureau of Air Regulation."

The final action of the Department is to issue the permit with the change noted above.

Department of
Environmental Protection

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

Jeb Bush
Governor

David B. Struhs
Secretary

PERMITTEE:

US Agri-Chemicals Corporation
3225 State Rd. 630 West
Ft. Meade, Florida 33841

File No.	1050051-009-AC
Permit No.	PSD-FL-278
SIC No.	2874
Project:	Ft. Meade Chemical Plant
Expires:	October 1, 2002

Authorized Representative:

Phong T. Vo
General Manager of Eng. And Tech. Services

PROJECT AND LOCATION:

Permit for the construction /modification of the Ft. Meade Chemical Plant to increase production rate of the existing Sulfuric Acid Plants Nos. 1 and 2 to 3000 tons per day, each; to match the previously-permitted production rates, increase the production rate of the existing Phosphoric Acid Trains A and B from 44 to 50 tons per hour P_2O_5 input, each; and a proportional increase in the processing rate of the Phosphoric Acid Tank Farm. UTM coordinates are Zone 17; 416.2 km E; 3068.7 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

ATTACHED APPENDICES ARE MADE A PART OF THIS PERMIT:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

The Ft. Meade Chemical Plant is an agricultural chemicals manufacturing facility. Phosphate rock is reacted with sulfuric acid (purchased or produced on-site) to make phosphoric acid. The phosphoric acid is further processed into monoammonium phosphate (MAP) and diammonium phosphate (DAP).

This permit is issued to allow an increase in the production rate of the existing Sulfuric Acid Plants Nos. 1 and 2 to 3000 tons per day, each; to match the previously-permitted production rates, an increase in the production rate of the existing Phosphoric Acid Trains A and B from 44 to 50 tons per hour P_2O_5 input, each; and a proportional increase in the processing rate of the Phosphoric Acid Tank Farm.

REGULATORY CLASSIFICATION

The facility is classified as a major source of air pollution or Title V source because it has the potential to emit at least 100 tons per year of sulfur dioxide and nitrogen oxides.

PERMIT SCHEDULE:

- 10-18-1999: Date of Receipt of Application
- 08-29-2000: Application deemed complete
- 11-01-2000: Intent issued

RELEVANT DOCUMENTS:

The documents listed form the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received 10-18-1999
- Department letters dated 11-03-1999, 03-03-2000, 07-20-2000 and 07-21-2000
- Applicant letters dated 02-02-2000, 06-23-2000 and 08-29-2000
- Technical Evaluation and Preliminary Determination dated 10-31-2000
- Best Available Control Technology determination (issued concurrently with permit)
- USEPA's letter dated 12-15-2000
- Koogler & Associates letters dated 01-17-2001 and 01-26-2001

SECTION II. EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department of Environmental Protection, Southwest District Office located at 3804 Coconut Palm Drive, Tampa, Florida 33619, and phone number (813) 744-6100. All applications for permits to construct or modify an emission unit(s) subject to the Prevention of Significant Deterioration (PSD) should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.

2. General Conditions: The owner and operator are subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. **[Rule 62-4.160, F.A.C.]**

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. **[Rule 62-210.900, F.A.C.]**

5. Expiration: This air construction permit shall expire on **October 1, 2002. [Rule 62-210.300(1), F.A.C.].** The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the permitting authority office of any delays in completion of the project which would affect the startup day by more than 90 days. **[Rule 62-4.090, F.A.C]**

6. Applicable Regulations: The facility is subject to the following regulations: Florida Administrative Code Chapters 62-4; 62-103; 62-204; 62-210; 62-212, 62-213, 62-296, and 62-297. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. **[Rule 62-210.300, F.A.C.]**

COMMON CONDITIONS: 40 CFR 60 - NEW SOURCE PERFORMANCE STANDARDS

This permit addresses the following emission units.

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
016	Sulfuric Acid Plant No. 1
017	Sulfuric Acid Plant No. 2
005	Phosphoric Acid A Train
020	Phosphoric Acid B Train
021	Phosphoric Acid Tank Farm

These emission units shall comply with all applicable requirements of 40 CFR 60, General provisions, Subpart A, adopted by reference in Rule 62-204.800(7), F.A.C.

- 40 CFR 60.7, Notification and record keeping
- 40 CFR 60.8, Performance tests
- 40 CFR 60.11, Compliance with standards and maintenance requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring requirements
- 40 CFR 60.19, General notification and reporting requirements

The Phosphoric Acid Trains A and B are subject to the applicable requirements of the New Source Performance Standards (NSPS) under 40 CFR 60 Subpart T, Standards of Performance for Wet-Process Phosphoric Acid Plants and National Emission Standards for Hazardous Pollutants (NESHAPs) under 40 CFR 63 Subpart AA, for Phosphoric Acid Plants.

The Phosphoric Acid Tank Farm is not subject to NSPS (40 CFR 60 Subpart T) or NESHAPs (40 CFR 63 Subpart AA).

The Sulfuric Acid Plant Nos. 1 and 2 are subject to the applicable requirements of the New Source Performance Standards (NSPS) under 40 CFR 60 Subpart H, Standards of Performance for Sulfuric Acid Plants.

SPECIFIC CONDITIONS:

The Specific Conditions listed in this subsection apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
016	Sulfuric Acid Plant No. 1
017	Sulfuric Acid Plant No. 2
005	Phosphoric Acid A Train
020	Phosphoric Acid B Train
021	Phosphoric Acid Tank Farm

1. Unless otherwise indicated, the construction and operation of the subject agricultural chemicals production facilities shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

2. The subject emissions units shall comply with all applicable provisions of the 40 CFR 60 New Source Performance Standards for Wet-Process Phosphoric Acid Plants, Subpart T and for Sulfuric Acid Plants, Subpart H; and, 40 CFR 63 Subpart AA, for phosphoric acid plants, as applicable. **[Rule 62-204.800 F.A.C.]**

3. The maximum operation rates shall not exceed:

   a. Sulfuric Acid Plant Nos. 1 and 2, each - 3000 tpd 100% H_2SO_4;

   b. Phosphoric Acid Trains A and B, each - 50 tph P_2O_5 input, 30-day rolling average, and 55 tph maximum. Maximum annual rate shall not exceed 438,000 tons P_2O_5 input.

   c. Phosphoric Acid Tank Farm - 100 tph P_2O_5 input, 30-day rolling average, and 110 tph maximum. Maximum annual rate shall not exceed 876,000 tons P_2O_5 input.

   [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

4. The subject emission units are allowed to operate continuously (8760 hours/year).

   [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

5. Emissions of sulfur dioxide from the Sulfuric Acid Plant Nos. 1 and 2 each, shall not exceed 3.5 lb/ton 100% H_2SO_4, averaged over three hours, and 1916 tpy. **[Rule 62-212.400, F.A.C.]**

6. Emissions of sulfuric acid mist from the Sulfuric Acid Plant Nos. 1 and 2 each, shall not exceed 0.12 lb/ton 100% H_2SO_4 and 65.7 tpy. **[Rule 62-212.400, F.A.C.]**

7. Emissions of nitrogen oxides from the Sulfuric Acid Plant Nos. 1 and 2 each, shall not exceed 0.12 lb/ton 100% H_2SO_4 and 65.7 tpy. **[Rule 62-212.400, F.A.C.]**

8. Emissions of total fluorides from the Phosphoric Acid Trains A and B each, shall not exceed 0.012 lb/ton P_2O_5 input and 2.63 tpy. **[Rule 62-212400, F.A.C.]**

9. Emissions of total fluorides from the Phosphoric Acid Tank Farm, shall not exceed 1.0 lb/hr and 4.38 tpy. **[Rule 62-210.200, F.A.C.]**

10. Visible emissions shall not exceed 10 percent opacity from the sulfuric acid plants. **[Rule 62-212.400, F.A.C.]**

11. The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each phosphoric acid plant scrubbing system. Accuracy of the monitoring devices shall be $\pm$ 5% over the operating range. **[Rules 62-297.310, 62-204.800, F.A.C.; 40 CFR 60.203]**

12. In order to minimize excess emissions during startup/shutdown/malfunction these emissions units shall adhere to best operational practices. The provisions of the Memorandum of Understanding issued by the Department, are hereby added to this permit as Appendix A and shall be added to the Title V permit. **[Rule 62-210.700, F.A.C., 40 CFR 60.7]**

13. A continuous emissions monitoring system (CEMS) for the measurement of sulfur dioxide emissions shall be installed, calibrated, operated and maintained in accordance with 40 CFR 60.84 (1999 version).

14. Before this construction permit expires, the subject emission units shall be tested for compliance with the above emission limits. For the duration of all tests the emission unit shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 30 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

15. The Department's Southwest District office in Tampa shall be notified in writing at least 15 days prior to the compliance tests. Written reports of the test results shall be submitted to that office within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

16. The procedures for the initial compliance test shall be in accordance with EPA Reference Methods 1, 2, 3, 4, 6C, 7E, 8, 9 and 13A or 13B, as appropriate, as published in 40 CFR 60, Appendix A. 60, Appendix A. **[Rules 62-204.800 and 62-297.310(7)(c), F.A.C.]**

17. All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. **[Rule 62-4.070(3), F.A.C.]**

18. The permittee shall install, calibrate, maintain, and operate monitoring devices which can be used to determine the mass flow of phosphorus-bearing feed material to the phosphoric acid processes. The monitoring devices shall have an accuracy of ±5 percent over the operating range. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using the flow monitoring device meeting the requirements of 40 CFR 60.203(a), and then by proceeding according to 40 CFR 60.204(b)(3) **[Rule 62-204.800, F.A.C.]**

19. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

20. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

21. The subject emissions units shall be subject to the following:

    - Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in

any 24 hour period unless specifically authorized by the Department for longer duration. **[Rule 62-210.700, F.A.C.]**

- Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**
- Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. **[Rule 62-210.700, F.A.C.]**
- In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. **[Rule 62-210.700, F.A.C.]**
- The down time on the Phosphoric Acid Tank Farm scrubber, when the Tank Farm is operating, may exceed 2 hours in a 24-hour period for maintenance purposes only.

22. The permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation. **[Rule 62-210.370, F.A.C.]**

23. The permittee shall submit for a minimum period of one year additional ambient fluorides monitoring data. The samples collection shall follow the protocol as described in Koogler & Associates letter of January 26, 2001. The data gathering shall begin from the initial performance test and shall include additional twelve monthly data points. The last data shall be collected at the time of the first annual compliance test. Emission units 005 and 020 shall be operating at permitted capacity concurrently during the initial performance test and the first annual compliance test. A total of a minimum of fourteen (14) data points shall be submitted to the Bureau of Air Regulation. **[Rule 62-212.400(5)(f), F.A.C.]**

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Ft. Meade Chemical Plant
US Agri-Chemicals Corporation
PSD-FL-278 / 1050051-009-AC
Ft. Meade, Polk County

The project proposed by US Agri-Chemicals Corporation will increase the production rate of the existing Sulfuric Acid Plants Nos. 1 and 2 to 3000 tons per day, each; to match the previously-permitted production rates, increase the production rate of the existing Phosphoric Acid Trains A and B from 44 to 50 tons per hour P_2O_5 input, each; and will increase the processing rate of the Phosphoric Acid Tank Farm.

The proposed modification will result in a significant increase in emissions of sulfur dioxide (SO_2), sulfuric acid mist (SAM), nitrogen oxides (NO_X) and fluorides (F). The project is, therefore, subject to Prevention of Significant Deterioration (PSD) review in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). A Best Available Control Technology (BACT) determination is part of the review required by Rules 62-212.400 and 62-296, F.A.C.

DATE OF RECEIPT OF COMPLETE BACT APPLICATION:

August 29, 2000

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines what is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 and 63 - National Emission Standards for Hazardous Air Pollutants.

- All scientific, engineering, and technical material and other information available to the Department.

- The emission limiting standards or BACT determination of any other state.

- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as indicated below:

- ***Fluorides*** (HF, SiF_4). Controlled generally by scrubbing with pond water.
- ***Particulate Matter*** (PM, PM_{10}). Controlled generally by wet scrubbing or filtration.
- ***Combustion Products*** (SO_2, NO_X, PM). Controlled generally by good combustion of clean fuels.
- ***Products of Incomplete Combustion*** (CO, VOC). Controlled generally by proper combustion.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis.

Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM, SO_2, H_2SO_4, fluorides, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT LIMITS PROPOSED BY APPLICANT:

POLLUTANT	EMISSION UNIT	EMISSION LIMIT	CONTROL TECHNOLOGY
SO_2	Sulfuric Acid Plant Nos. 1 and 2	3.5 lb/ton H_2SO_4	Double Absorption Process
SAM	Sulfuric Acid Plant Nos. 1 and 2	0.12 lb/ton H_2SO_4	Fiber Mist Eliminators
NO_X	Sulfuric Acid Plant Nos. 1 and 2	0.12 lb/ton H_2SO_4	Good Combustion Practice
F	Phosphoric Acid Trains A and B	0.012 lb/ton P_2O_5 input	Wet scrubbers using pond water
F	Phos. Acid Tank Farm	1.0 lb/hr	Wet scrubbers using pond water

The applicant has proposed to use the existing double absorption process and improved process parameters to achieve the proposed limits for the sulfuric acid plants. The existing scrubbing systems are proposed as BACT for the phosphoric acid trains and the phosphoric acid tank farm.

BACT POLLUTANT ANALYSIS

The applicant will achieve the proposed emissions limits by improving the sulfur dioxide conversion of the traditional double absorption plant. The improvement will be accomplished by an increase in the catalyst loading. The emission limit of 3.5 pounds per ton of acid averaged over three hours was recently imposed on the new sulfuric acid plant at Farmland Hydro, L.P.

Control options involving production of by-products or wastes have been rejected as BACT. There is no indication that add-on control methods are competitive with process improvements that result in production of additional sulfuric acid. Recovery of sulfuric acid mist is an economic necessity as well as an environmental requirement. High efficiency mist eliminators are considered BACT for sulfuric acid mist.

The Department agrees with the applicant that the sulfur burning process utilized in the sulfuric acid plant inherently produces low NO_X emissions, and is considered BACT for NO_X.

Fluoride-containing gases, including hydrogen fluoride (HF), are evolved during the chemical reactions from the phosphoric acid process. Scrubbing the gas stream with pond water removes most of the fluoride evolved from the process.

The top-down BACT determination for fluorides identified the control technologies listed below starting with the most stringent:

1. Packed scrubber using once-through fresh water.
2. Packed scrubber using neutralized water from a dedicated pond (fresh water makeup).
3. Existing scrubber and process cooling pond water.

Use of once-through fresh water would achieve the highest level of fluoride removal but this option is not practical for operations where water conservation is required and plant water balance problems would be created.

Option 2 is possible, the main considerations being the cost of installing the pond and equipment and the cost of operating a lime treatment unit. Costs for Option 2, based on data for a similar project amounted to almost $40,000 per ton of fluorides removed. FDEP considers this figure sufficiently high to rule out Option 2. However, it should be noted that the low magnitude of fluoride emissions relative to their potential environmental impact justifies the consideration of higher fluoride cost effectiveness figures relative to the high tonnage pollutants such as sulfur dioxide and nitrogen oxides.

For the proposed project, Option 3, is determined by the top-down approach as the basis for the fluoride BACT emission limit.

The BACT limits tabulated above for the emission units evaluated are based on the recent compliance test results for the units between 1995 - 1999. These limits have been demonstrated to be achievable based on the historical test data for the emission units. The Department has concluded that the units can continue to achieve the same historically low emissions without the need for modifications.

BACT DETERMINATION BY THE DEPARTMENT:

Based on the information provided by the applicant, the above analysis and other information available to the Department, the following emission limits are established employing the top-down BACT approach.

POLLUTANT	EMISSION UNIT	LIMIT BASIS	CONTROL TECHNOLOGY
SO_2	Sulfuric Acid Plant Nos. 1 and 2	3.5 lb/ton H_2SO_4	Double Absorption Process
SAM	Sulfuric Acid Plant Nos. 1 and 2	0.12 lb/ton H_2SO_4	Fiber Mist Eliminators
NO_X	Sulfuric Acid Plant Nos. 1 and 2	0.12 lb/ton H_2SO_4	Good Combustion Practice
F	Phosphoric Acid Trains A and B	0.012 lb/ton P_2O_5 input	Wet scrubbers using pond water
F	Phos. Acid Tank Farm	1.0 lb/hr	Wet scrubbers using pond water

These limits have been demonstrated to be achievable based on the historical test data for the emission units. SO_2 and F are the key parameters. The emission limits established for those are the lowest in the fertilizer industry.

COMPLIANCE

Compliance with the sulfur dioxide, sulfuric acid mist, nitrogen oxides and fluoride limits shall be demonstrated using EPA Reference Methods 1, 2, 3, 4, 6C, 7E, 8, 9 and 13A or 13B as appropriate, and contained in 40 CFR 60, Appendix A.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Syed Arif, P.E., Permit Engineer, New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

2/5/01
Date:

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

2/5/01
Date:

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *(X)*
(b) Determination of Prevention of Significant Deterioration *(X)*; and
(c) Compliance with New Source Performance Standards *(X)*.

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Memorandum

Florida Department of
Environmental Protection

BAR

TO: Howard L. Rhodes

THRU: Clair Fancy

THRU: Al Linero

FROM Syed Arif 2/5

DATE: February 5, 2001

SUBJECT: U.S. Agri-Chemicals Corporation (USAC)
DEP File No. 1050051-009-AC; PSD-FL-278

Attached for your approval and signature is the final construction permit to increase production at the USAC facility in Ft. Meade.

The Sulfuric Acid Plants (No. 1 & 2) as well as A and B Phosphoric Acid Plants will increase production capability. A proportional increase will result in the processing rate of the Phosphoric Acid Tank Farm.

The double absorption process and mist eliminators will control sulfur dioxide and sulfuric acid mist emissions from the sulfuric acid plants, respectively. The BACT limits established for sulfur dioxide and sulfuric acid mist are 3.5 lb/ton H_2SO_4 and 0.12 lb/ton H_2SO_4, respectively. Controls for fluoride emissions consist of scrubbers using process pond water. The BACT determination concluded that the existing control equipment meets BACT requirements. The fluoride BACT limits for the phosphoric acid plants were established at 0.012 lb/ton P_2O_5 input.

There was a comment from EPA during the public notice period. They want modeling of fluoride to determine whether predicted impacts from the proposed increase in fluoride emissions would be greater than the preconstruction monitoring de minimus impact level. They also want at least a qualitative assessment of the fluoride emissions on soils, vegetation, wildlife, and visibility.

We recognize the requirement to perform this modeling and the qualitative assessment. However, even if the de minimus level is exceeded there are no state or EPA-specified monitoring methods for fluoride.

The Company has agreed to perform ambient fluorides monitoring for a period of one year to assess the qualitative impact of this modification. The monitor was installed in conjunction with USAC's Gyp Stack expansion.

Day 90 is February 13, 2001. Today is day 82 of 90.

I recommend your approval and signature.

AAL/sa