

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

MEMORANDUM

TO: J. J. Lewis, AMAX Phosphate, Inc.
Fred G. Mullins, AMAX Phosphate, Inc.
James B. Whittum, P. J. Pedone & Co.
Dan Williams, FDER Southwest District
Iwan Choronenko, Hillsborough County Environmental
Protection Commission

FROM: C. H. Fancy, Deputy Chief, Bureau of Air
Quality Management

DATE: June 21, 1982

SUBJ: Preliminary Determination - AMAX Phosphate, Inc.
Phosphate Feed Preparation Unit (AC 29-55785)

Attached is one copy of the application, Technical Evaluation and Preliminary Determination, and proposed permit to AMAX Phosphate, Inc., to install an air pollution control device at their existing phosphate plant near Plant City in Hillsborough County, Florida.

Please submit any comments which you wish to have considered concerning this action, in writing, to Bill Thomas of the Bureau of Air Quality Management.

CHF/bjm

Attachment

NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Regulation gives notice of its intent to issue a permit to AMAX Phosphate, Inc. to install an air pollution control device (scrubber) at their existing phosphate plant near Plant City in Hillsborough County, Florida. The new scrubber will supplement an existing scrubber in their phosphate feed preparation unit and emit up to 24.8 TPY of particulate matter. A BACT/LAER determination was not required. No other criteria pollutants will be emitted by the new scrubber. Total permitted emissions from the facility will not be increased and actual emissions from the unconfined particulate matter equipment in the facility will decrease by an unspecified amount. Emissions from the new scrubber will not have a significant impact on the ambient air quality of Hillsborough County.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapter 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 am to 5:00 pm, Monday through Friday, except legal holidays at:

Department of Environmental Regulation
7601 Highway 301 N
Tampa, Florida 33610

Hillsborough County Environmental Protection Commission
1900 9th Avenue
Tampa, Florida

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
 - (a) The name and address of each agency affected and each agency's file or identification number, if known;
 - (b) The name and address of the petitioner or petitioners;
 - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
 - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
 - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
 - (f) A demand for the relief to which the petitioner deems himself entitled; and
 - (g) Such other information which the petitioner contends is material.

Preliminary Determination
and
Technical Evaluation

AMAX Phosphate, Inc.
Phosphate Feed Preparation Unit
Plant City, Florida

State Permit Number:

AC 29-55785

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting
June 21, 1982

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Draft State Permit
Amax Phosphate, Inc. Application - May 11, 1982
Amax Phosphate, Inc. letter - May 26, 1982

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

I. PROJECT DESCRIPTION

A. Applicant

AMAX Phosphate, Inc.
402 South Kentucky Avenue
Suite 600
Lakeland, Florida 33801

B. Project and Location

AMAX presently uses one air pollution control device (scrubber) to control the emissions from a dryer, mixer and pug mill at their feed preparation unit in Plant City. Unconfined particulate matter emissions from a conveyor in the feed preparation unit are uncontrolled.

The Company proposes to continue to control the emissions from the dryer with the existing scrubber but install a new scrubber to control the emissions from the existing mixer, pug mill and conveyors. The actual particulate matter emissions from the new scrubber will be 6.8 pounds per hour and (24.8 TPY). No other criteria pollutants will be emitted by the new scrubber.

C. Process and Controls

In the feed preparation plant, phosphate rock, phosphoric acid and caustic soda are mixed in a granulator rotary mixer and pug mill. This mixture, 73 TPH, is dried and the product, 60 TPH, is conveyed to the product elevator that transports it to the prepared feed storage section of the plant. A new Hydronics venturi scrubber will collect the particulate matter emissions from the granulator rotary mixer, pug mill, and two vibrating pan conveyors. The 99.8 percent efficient scrubber will handle 21,000 ACFM of gas from the process equipment and reduce the emissions to 6.8 pounds per hour particulate matter. AMAX's choice of the venturi scrubber to control particulate matter and gaseous fluoride emissions from the process equipment is an appropriate choice that is consistent with good engineering practice and its use is considered reasonable precautions to control unconfined particulate matter.

The feed preparation dryer will remain connected to the existing scrubber that is presently permitted to operate under state permit number AO 29-6315. Removing the mixer and pug mill from this scrubber should improve its performance and lower the actual emissions from the existing scrubber. Operation permit AO 29-6315 will be modified to reflect these lower emissions after the new scrubber is placed in operation. There will be no increase in permitted emissions from the facility as a result of this project.

II. RULE APPLICABILITY

The proposed project is not subject to preconstruction review under federal regulations, 40 CFR 52.21, because the potential increases in emissions of all criteria pollutants resulting from the modification are less than the significant levels.

The project is subject to preconstruction review under provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The project is in an area designated nonattainment for ozone, attainment for particulate matter but in the area of influence of the Hillsborough County particulate matter nonattainment area, and unclassified for sulfur dioxide.

As the new scrubber is not a source of VOC or sulfur dioxide, regulations of these pollutants are not applicable.

As the increase in particulate matter emissions is less than the significant level, the modification is not subject to PSD review under section 17-2.500(2)(d), FAC.

Based on BAQM screening procedures, the maximum particulate matter emissions from the new scrubber will not have a significant impact on the Hillsborough County particulate matter nonattainment area. Therefore, the modification is exempt from the RACT regulations, 17-2.650(2).

The conveyor being controlled by the new scrubber is a source of unconfined emissions of particulate matter and subject to 17-2.610(3). This rule requires any permit issued to a source of unconfined particulate matter to specify reasonable precautions to be taken by that source to control emissions of the unconfined particulate matter.

III. SUMMARY OF EMISSIONS AND AIR QUALITY IMPACT

A. Emissions

The particulate matter control performance of the new scrubber guaranteed by the manufacturer is 99.8 percent removals of all particles 0.7 microns in size or larger and a maximum discharge of 0.03 grains per cubic foot during the first three months of operation. At 21,000 CFM, the maximum emission of particulate matter during this period would be 5.4 pounds per hour. AMAX requested the maximum allowable emissions from the new scrubber be set at 6.8 pounds per hour to allow for fluctuations due to process and maintenance problems. As these problems, along with corrosion and wear of the equipment during its life, will decrease the optimum performance of any control device, the Department has approved their request and proposes allowable emission of 6.8 pounds per hour and 24.8 TPY particulate matter. The allowable emissions from the existing scrubber servicing the

dryer (34.57 lb/hr) will be reduced by a corresponding amount resulting in no change in the present allowable emission from the facility. The actual emission will decrease because the unconfined particulate emissions from the conveyor will be controlled by the new scrubber.

Based upon the projected decrease in actual particulate matter emissions from the facility, the Department has reasonable assurance that the ambient air quality standard will not be exceeded as a result of the installation of the new scrubber.

IV. CONCLUSION

Based on a review of the data submitted by AMAX Phosphate, Inc., the Department concludes that the Company will reduce particulate matter emissions by installing an additional scrubber in the phosphate feed preparation plant. The emissions from the new scrubber will be in compliance with all applicable county and state regulations.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with all applicable air pollution control regulations.

The Department therefore proposes that AMAX Phosphate, Inc. be authorized to install a new scrubber in their phosphated feed preparation plant subject to the conditions in the attached draft state permit.

STATE OF FLORIDA
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TWIN TOWERS OFFICE BUILDING
2500 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

APPLICANT: AMAX Phosphate, Inc.
402 South Kentucky Avenue
Lakeland, Florida 33801

PERMIT/CERTIFICATION
NO. AC 29-55785

COUNTY: Hillsborough

PROJECT: phosphate
Feed Preparation

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

Installation of a Hydronics Venturi Scrubber (or equivalent) and duct work to control emissions from mixer, pug mill and vibrating pan conveyors in the phosphate feed preparation plant. The project is located at AMAX Phosphate, Inc. existing facility on Coronet Road, Plant City, Hillsborough County, Florida.

The UTM coordinates of the plant are 393.8 East and 3096.3 North. Construction and operation of the source shall be in accordance with the permit application dated May 11, 1982 and the supplemental information described in AMAX Phosphate, Inc. letter dated May 26, 1982.

PERMIT NO.: AC 29-55785
APPLICANT: AMAX Phosphate, Inc.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions", and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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

3. 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 notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact 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 revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. 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 arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, 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.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.

13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT)
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-55785
APPLICANT: AMAX Phosphate, Inc.

SPECIFIC CONDITIONS:

1. Construction authorized by this permit must begin within 180 days of receiving the state permit. The applicant shall report any delays in construction and completion of the project to the Department's Southwest District Office and Hillsborough County Environmental Protection Commission.
2. Construction shall reasonably conform to the plans submitted in the application. Substitution of an equivalent scrubber to the Hydronics Venturi Scrubber proposed in the application must have Department approval before installation.
3. Maximum production rate of the phosphate feed product shall not exceed 60 TPH.
4. Maximum operation time for the phosphate feed preparation plant shall not exceed 7,280 hours per year.
5. Particulate matter emission, determined by reference method 5 as specified in 40 CFR 60, Appendix A, shall not exceed 6.8 pounds per hour. Test for this pollutant while the dryer is operating at 90 to 100 percent capacity. Test reports shall be submitted semiannually to the Department's Southwest District Office and Hillsborough County Environmental Protection Commission. Visible emissions from any equipment in the phosphate feed preparation plant, as determined semiannually by reference method 9 described in 40 CFR 60, Appendix A, shall not exceed 10 percent opacity. Visible emission test shall be conducted and reported simultaneously with the particulate matter test.
6. The Department shall be notified 30 days in advance of any compliance test.
7. The following data from the scrubber will be obtained each day the phosphate feed preparation plant operates and records of the data kept for 2 years for regulatory agency inspection.
 - a. Pressure drop of the gas in inches of water;
 - b. Flow rate of scrubber water in GPM. A weir or similar device may be used to obtain the flows;
 - c. Water header pressure.

PERMIT NO.: AC 29-55785
APPLICANT: AMAX Phosphate, Inc.

8. Stack test facilities shall meet the minimum specifications in Chapter 17-2.700(4), FAC.
9. The applicant shall demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to Hillsborough County Environmental Protection Commission prior to 90 days before the expiration date of this permit. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration or until issuance of an operating permit.
10. Upon obtaining an operating permit, the applicant will be required to submit annual reports on the actual operation of the facility. These reports will include, as minimum: total production for the year, maximum production rate, total hours of operation, type-quantity-sulfur content of any fuel used (average and maximum) and emission test results.
11. Operation permit AO 29-6315 shall be revised to reflect the lower allowable emission prior to operating permit issuance for the new scrubber.

Expiration Date: July 1, 1983

Issued this _____ day of _____, 19_____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

____ Pages Attached.

Signature