

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**INTEROFFICE MEMORANDUM**

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: District, Subdistrict and Local Program Air Engineers

FROM: Ed Palagyi *EP*

DATE: November 12, 1980

SUBJ: B.A.C.T. as determined for USS Agri-Chemicals Phosphate Fertilizer Complex for a Sulfuric and Phosphoric Acid Plant plus Auxiliary Boiler, Ft. Meade, Polk County, Florida

Attached please find one copy of the BACT as determined by the Florida Department of Environmental Regulation, for the subject plant.

Should you have any questions regarding this determination, please contact me at (904) 488-1344, or Suncom 278-1344.

## DEPARTMENT OF ENVIRONMENTAL REGULATION

## INTEROFFICE MEMORANDUM

Routing To District Offices  
And/Or To Other Than The Addressee

To: _____	Loctn.: _____
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From: _____	Date: _____

TO: Jacob D. Varn  
 FROM: Steve Smallwood  
 DATE: November 5, 1980  
 SUBJ: BACT-USS Agri-Chemicals Phosphate Fertilizer Plant  
 Modernization.

Facilities: USS Agri-Chemicals Phosphate Fertilizer complex near Ft. Meade, Florida consists of a phosphate rock drying and grinding system, 2 sulfuric acid plants, an auxiliary boiler, 2 phosphoric acid plants, 2 GTSP plants, along with storage and shipping facilities. The company proposes to replace the 2 sulfuric acid plants, the auxiliary boiler and the 2 phosphoric acid plants with new plants.

BACT Determination Requested by the Applicant:

<u>Plant</u>	<u>Pollutant</u>	<u>Standard</u>
Sulfuric Acid	SO <sub>2</sub>	4 lb/ton 100% H <sub>2</sub> SO <sub>4</sub>
	H <sub>2</sub> SO <sub>4</sub> Mist	0.15 lb/ton 100% H <sub>2</sub> SO <sub>4</sub>
Auxiliary Boiler	SO <sub>2</sub> (oil fuel)	0.51 lb/MM BTU
	NO <sub>x</sub> (oil fuel)	0.3 lb/MM BTU
	NO <sub>x</sub> (gas fuel)	0.2 lb/MM BTU
Phosphoric Acid	Fluoride	0.02 lb F/ton P <sub>2</sub> O <sub>5</sub> feed

Date of Receipt of a BACT Application:

September 29, 1980

Date of Publication in the Florida Administrative Weekly:

October 31, 1980

Study Group Members:

Bob Garrett, Southwest District  
 Teresa Heron, Bureau of Air Quality Management  
 Bob King, Bureau of Air Quality Management

Study Group Recommendations:

	<u>Sulfur Acid Plant</u>	<u>Auxiliary Boiler</u>	<u>Phosphoric Acid Plant</u>
Garrett	4 lb. SO <sub>2</sub> /ton 100% H <sub>2</sub> SO <sub>4</sub> 0.15 lb. Acid Mist/ton 100% H <sub>2</sub> SO <sub>4</sub>  10% maximum opacity	Max. 0.5% S in oil 0.51 lb. SO <sub>2</sub> /MMBTU  0.3 lbs. NO <sub>x</sub> /MMBTU less than 0.2 lbs. CO, HC, & TSP/MMBTU	0.02 lb. fluoride ton P <sub>2</sub> O <sub>5</sub> input  Particulate-deferred
Heron	4 lb. SO <sub>2</sub> /ton 100% H <sub>2</sub> SO <sub>4</sub> 0.15 lb. acid mist/ton 100% H <sub>2</sub> SO <sub>4</sub>	Use of low sulfur (0.5% S) no. 2 fuel oil	0.02 lbs. F ton P <sub>2</sub> O <sub>5</sub>
King	4 lb SO <sub>2</sub> /T 100% H <sub>2</sub> SO <sub>4</sub> 0.15 lb. acid mist/ton 100% H <sub>2</sub> SO <sub>4</sub>	0.51 lb. SO <sub>2</sub> MMBTU  0.3 lb. NO <sub>x</sub> (oil) MMBTU  0.2 lb NO <sub>x</sub> (gas) MMBTU	0.02 lbs. F ton P <sub>2</sub> O <sub>5</sub> feed

BACT Determination by DER:

	<u>Pollutant</u>	<u>BACT Standard</u>
Sulfuric Acid Plants	SO <sub>2</sub>	4 lb. SO <sub>2</sub> /ton 100% H <sub>2</sub> SO <sub>4</sub> and 367 lb. SO <sub>2</sub> /hr. per train
	acid mist	0.15 lb. acid mist/T 100% H <sub>2</sub> SO <sub>4</sub> and/ and 13.8 lb. mist per train <sup>2</sup> hr.
	visible emissions	10% maximum opacity
Auxiliary Boiler	SO <sub>2</sub>	0.51 lb. SO <sub>2</sub> /MMBTU
	NO <sub>x</sub>	0.3 lb. NO <sub>x</sub> /MMBTU or
	Particulate	0.2 lb. particulate/MMBTU
		Use of low sulfur fuel (max. 0.5%S) and 20% opacity

Jacob D. Varn  
Page Three

	<u>Pollutant</u>	<u>BACT Standard</u>
Phosphoric Acid Plants		
reaction area	total fluoride	0.02 lbs. and 0.53 lbs./train ton P <sub>2</sub> O <sub>5</sub> hr.
	particulate	5.9 lbs. per train hr.
Storage area	total fluoride	0.36 lbs. for both trains hr.

Compliance will be determined by reference methods 1, 2, 3, 4, 5, 8, 9, 13A or 13 B. Minimum sample volume per run will be 30 SCF and minimum sample time per run will be 1 hour.

Justification of DER Determination:

NSPS was selected as BACT for the sulfuric and phosphoric acid plants; Control equipment is available to meet these standards. The applicant's proposals were accepted for the BACT standards on the auxiliary boiler and phosphoric acid storage area.

Details of the Determination:

Details of the Determination may be obtained by contacting:

Willard Hanks  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Recommendation from the Bureau of Air Quality Management:

By: Steve Smallwood  
for Steve Smallwood

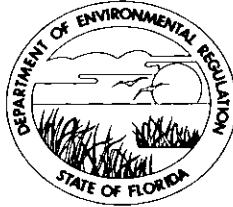
Date: 11/7/80

Department of Environmental Regulation Approval:

By: Jacob D. Varn  
Jacob D. Varn

Date: 10 NOV. 80

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



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

**DEPARTMENT OF ENVIRONMENTAL REGULATION**

MEMORANDUM

TO: Mr. G. W. Beck, U.S.S. Agri-Chemicals  
Mr. William Hennessey, DER, Southwest District

FROM: *BT for* Steve Smallwood, DER, Bureau of Air Quality Management

DATE: November 10, 1980

SUBJ: U.S.S. Agri-Chemicals Application for Permit to Construct two sulfuric acid plants and auxiliary boiler, two phosphoric acid plants and a scrubber for the phosphoric acid storage area.

Attached is one copy of the application, Technical Evaluation and Preliminary Determination, BACT Determination and proposed permit to construct two sulfuric acid plants, one auxiliary boiler, two phosphoric acid plants and a scrubber for the phosphoric acid storage area, to be located on Highway 630 West in Ft. Meade, Polk County, Florida.

Please send any comments which you wish to be considered concerning this action, in writing, to Willard Hanks of the Bureau of Air Quality Management.

SS:caa

Attachments

CONSTRUCTION NOTICE

The Florida Department of Environmental Regulation (DER) has received applications from and intends to issue Construction Permits to U.S.S. Agri-Chemicals Company for the construction of two sulfuric acid plants, one Auxiliary boiler and two phosphoric acid plants to be located on Highway 630 West of Ft. Meade, Polk County, Florida. A determination of Best Available Control Technology was required. Copies of the application, BACT Determination, Technical Evaluation, and Departmental Intent are available for inspection at the following offices:

DER, Southwest District  
7601 Highway 301 North  
Tampa, Florida 33601

DER, Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Procedure for filing comments or requesting a hearing on this action are described in the Technical Evaluation.

Technical Evaluation  
and  
Preliminary Determination

U.S.S. Agri-Chemical Company  
Ft. Meade Facility  
Polk County, Florida

Construction Permit  
Application Numbers

AC 53-33818  
AC 53-33819  
AC 53-33820  
AC 53-33821  
AC 53-33822  
AC 53-33868

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting  
November 4, 1980

I. PROPOSED DEPARTMENT ACTION:

The Department intends to issue the requested permits to USS Agri-Chemicals for the construction of two Sulfuric acid Plants, one auxiliary boiler, two phosphoric acid plants, and a scrubber for the phosphoric acid storage area at its complex located on Highway 630 West of Ft. Meade, Polk County, Florida. The permits will include conditions to assure compliance with Chapter 17-2, FAC.

Any person wishing to comment on this proposed action may do so by submitting such comments in writing to:

Willard Hanks  
Florida Department of Environmental  
Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Any person whose substantial interest would be affected by the issuance of this permit may request an administrative hearing by filing a petition for hearing as set forth in Section 28-5.15 (copy attached). Such petition must be filed within 14 days of the date this notice is published. Such petition is to be filed with:

Mary Clark  
Office of General Counsel  
Florida Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

II. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS:

a. The proposed construction location, on Highway 630 West in Ft. Meade, Polk County, is approximately 47 kms. south east of the boundary of the Hillsborough County particulate nonattainment area. This places the proposed source within the area of influence of that nonattainment area. The location is "unclassifiable" for the criteria pollutant particulate and attainment for the remaining criteria pollutants.

b. The sources will emit fluoride, particulate, sulfuric acid mist and sulfur dioxide.

c. Best Available Control Technology. BACT for the phosphoric acid plants was determined to be 0.02 lb F/ton  $P_2O_5$ /train and 5.9 lbs. particulate/hr./train when using venturi cyclone scrubbers as a control device.



BACT for the sulfuric acid plant are 4 lb  $\text{SO}_2$ /ton  $\text{H}_2\text{SO}_4$  and 0.15 lbs. acid mist/ton  $\text{H}_2\text{SO}_4$  proposed by the Company.

BACT for the auxiliary boiler are 0.51 lb.  $\text{SO}_2$ /MMBTU, 0.3 lbs.  $\text{NO}_x$ /MMBTU and 0.2 lb. particulate/MMBTU.

BACT for the phosphoric acid storage area is 0.36 lb F/hr. This standard is met with a ejector venturi scrubber.

b. The proposed plants are a major emitting facilities for fluoride and sulfur dioxide as defined in 17-2.02(70) FAC because the potential emissions exceed 100 TPY.

c. Modeling results indicate that no violation of sulfur dioxide PSD increment and ambient air quality standard will occur.

### III. SYNOPSIS OF APPLICATIONS:

a. Name and Address of Applicant:

U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

b. Description of Project and Controls:

The proposed project involves the construction of two identical double absorption sulfuric acid plants, one auxiliary boiler and two wet phosphoric acid plants to replace the old plants.

In the sulfuric acid plants, emissions of sulfur dioxide and sulfuric acid mist will be controlled with a double absorption system and mist eliminator.

In the phosphoric acid plants, a venturi cyclone scrubber will be used to remove particulate and fluoride emissions.

c. A ejector venturi scrubber will be used to control emissions from the phosphoric acid storage area.

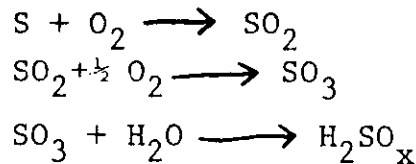
Low sulfur No. 2 fuel oil will be used to control emissions from the auxiliary boiler.

d. Descriptions of Processes, Proposed Processes Rates and Emissions Rates:

#### Sulfuric Acid Plants:

The principal steps in the process consist of burning sulfur (S) in air to form sulfur dioxide ( $\text{SO}_2$ ), combining the sulfur dioxide with oxygen ( $\text{O}_2$ ) to form sulfur trioxide ( $\text{SO}_3$ ), and absorbing the sulfur trioxide in water ( $\text{H}_2\text{O}$ ) to form sulfuric acid ( $\text{H}_2\text{SO}_4$ ).

The chemical reaction are:

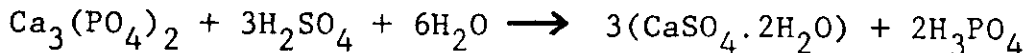


The new sulfuric acid plants will have a combined production capacity of up to 4,400 tons of 100 per H<sub>2</sub>SO<sub>4</sub> per day.

The boiler will provide an independent supply of steam to start up the sulfuric acid plants. It may be used as an auxiliary steam supply in event of an unscheduled shut down of one or both of the sulfuric acid plant.

Wet Phosphoric Acid Plants:

Phosphoric acid is produced by reacting ground phosphate rock with sulfuric acid. This reaction produces phosphoric acid and gypsum.



The new plants will use wet rock grinding which is more environmentally favorable and energy conservative than dry rock grinding. Each plant consists of a reactor along with filters, storage, and clarification area and a fluorosilicic acid recovery system.

The maximum production rate is 1,540 ton/day for the phosphoric acid plants.

The following table outlines the proposed emission rates for the new sources:

<u>Pollutant</u>	<u>Sulfuric Acid Plant</u> (per train)	<u>Phosphoric Acid Plant</u> <u>and Storage Area</u> (per train)	<u>Boiler</u>
Particulate	N/A	5.9 lb/hr.	
Fluoride	N/A	0.71 lb/hr.	
SO <sub>2</sub>	367 lb/hr.	N/A	
H <sub>2</sub> SO <sub>4</sub> mist	13.75 lb/hr.	N/A	N/A
NO <sub>2</sub> fuel oil	N/A	N/A	0.3 lb/10 <sup>6</sup> BTU
NO <sub>2</sub> natural gas	N/A	N/A	0.2 lb/10 <sup>6</sup> BTU
HC <sup>2</sup>	N/A	N/A	< 1 ton/year
CO	N/A	N/A	< 1 ton/year

The stack parameters are as follows:

	<u>Sulfuric Acid Plant</u>	<u>Phosphoric Acid Plant</u> Reactor & Clarification Filtration and Storage		<u>Boiler</u>	<u>Unit</u>
Stack Height	175	75	62	70	ft.
Gas Flow rate	112123	18000	6000	31700	ACFM
Water Vapor Content	nil	Saturated		18	%
Stack Diameter	8.5	3.4	3.0	3.67	ft.
Gas Exit Temperature	180	100	105	400	°F
Velocity	34	33.3	14.2	50	FPS

The attached drawings shows the processes and pollution abatement equipments.

IV. RULE APPLICABILITY:

The sources are a major emitting facilities for fluoride and sulfur dioxide as defined in 17-2.02(70) FAC because the potential emission exceed 100 TPY. The projects are subject to provisions of 17-2.05(6) Table II, item B(2) for sulfuric acid plants, item C(1) (a) for the wet phosphoric acid plant and item E(2) which requires the use of best and latest technology on Fossil Fuel Steam Generators.

Therefore, the applications are subject to 17-2.03 BACT which was determined by D.E.R.

Mathematical modeling for determination of maximum sulfur dioxide emission impact on the ambient air concentration, as required under the Prevention of Significant Deterioration (PSD) results indicate that no violations of the sulfur dioxide PSD increment and ambient air standard will occur.

V. FINDING:

Best Available Control Technology (BACT) has been determined, as required by 17-2.03 F.A.C. for Fluoride, Particulate, Sulfur Dioxide, Sulfuric Acid mist and nitrogen dioxide emissions from the proposed sources.

The standards selected as BACT, which are the permitted emissions through the stacks, are listed below:

	<u>Pollutant</u>	<u>Emission Standard</u>
Sulfuric Acid Plants	SO <sub>2</sub>	4 lbs. SO <sub>2</sub> /T 100% H <sub>2</sub> SO <sub>4</sub>
	acid mist	0.15 lbs. acid mist/T 100% H <sub>2</sub> SO <sub>4</sub>
	visible emissions	10% maximum opacity
Auxiliary Boiler	SO <sub>2</sub>	0.51 lbs. SO <sub>2</sub> /MMBTU
	NO <sub>x</sub>	0.3 lbs. NO <sub>x</sub> /MMBTU
	Particulate	0.2 lbs. particulate/ MMBTU or (max. 0.5% S) and 20% opacity
Phosphoric Acid Plants		
Reaction area	total fluoride	0.02 lb. and 0.53 lb. per train TP <sub>2</sub> O <sub>5</sub> feed hr.
	particulate	5.9 lb. per train hr.
Storage area	total fluoride	0.36 lb. for both trains hr.

Sulfuric Acid Plants:

1. The proposed facilities are a major sulfur dioxide emitting facilities because the potential sulfur dioxide emissions are more than 100 tons per year/plant.
2. The proposed facilities are not a major emitting facilities for nitrogen oxides, particulate, HC, CO, as listed in definition 17-2.02(70) FAC, and will not have uncontrolled emissions greater than 100 tons per year/plant.
3. Modeling results conclude no violations of the PSD or ambient air standards for SO<sub>2</sub> will occur.
4. The installation of the double absorption system and mist eliminator will minimize the discharge of sulfur dioxide and sulfuric acid mist.

5. Cooling tower blowdown, boiler blowdown, and feedwater treatment unit blowdown are non-process effluents and will be discharged to the plant outfall.

Auxiliary Boiler:

1. The auxiliary boiler will be a conventional dual fired, water tube, package boiler, with a maximum input rating at  $100 \times 10^6$  BTU per hour, generating saturated steam at 250 psig pressure.
2. The boiler is designed to use natural gas or No. 2 fuel oil. Natural gas will be used whenever available which is expected to be about 50 percent of the time.
3. The new auxiliary boiler is a replacement for an existing auxiliary boiler and does not represent a net change in emissions.
4. Emission estimates of the boiler are based on expected operation time of 840 hours/year, when burning No. 2 fuel oil.
5. The existing sulfuric acid plants and auxiliary boiler will be shut down within 3 months after the new plants will be tested for service.

Phosphoric Acid Plants:

1. Based on the data presented in the application, the total emissions are projected to be equal to or less than amounts set forth in the following table:

Pollutant	lb/TP <sub>2</sub> O <sub>5</sub> /train	lb/hr./train
Particulate		5.9
		0.53 Reaction area
Total Fluoride	0.02 lbF/ton P <sub>2</sub> O <sub>5</sub>	0.18 Storage Area

2. No fluoride compounds are in the gases exhausting from the Reactor and filter vacuum pumps.
3. The proposed facilities are a major fluoride emitting facilities since the potential fluoride emissions are more than 100 ton/year/train.
4. The proposed facilities are not a major emitting facilities for particulate, as listed in definition 17-2.02(70) FAC, and will not have uncontrolled emissions greater than 100 ton/year/train.

5. The plants control system includes fans and ducts which draw ambient air into the process and storage equipment where it mixes with contaminated fumes and conveys the contaminants to the scrubbers for removal.
6. Emission of particulate matter are expected to be no greater than 20 tons per year per train, or 40 tons per year for both trains combined.
7. Fugitive particulate emissions will decrease, as a result of the switch to a wet rock process.
8. The new phosphoric acid plants will not be a source of sulfur dioxide ( $\text{SO}_2$ ). Therefore, PSD provisions in FAC 17-2.04 related  $\text{SO}_2$  do not apply.
9. The existing plants will be shut down within 3 months after the new plants will be tested for service.

VI. PROPOSED ALLOWABLE EMISSIONS AND PERMIT CONDITIONS:

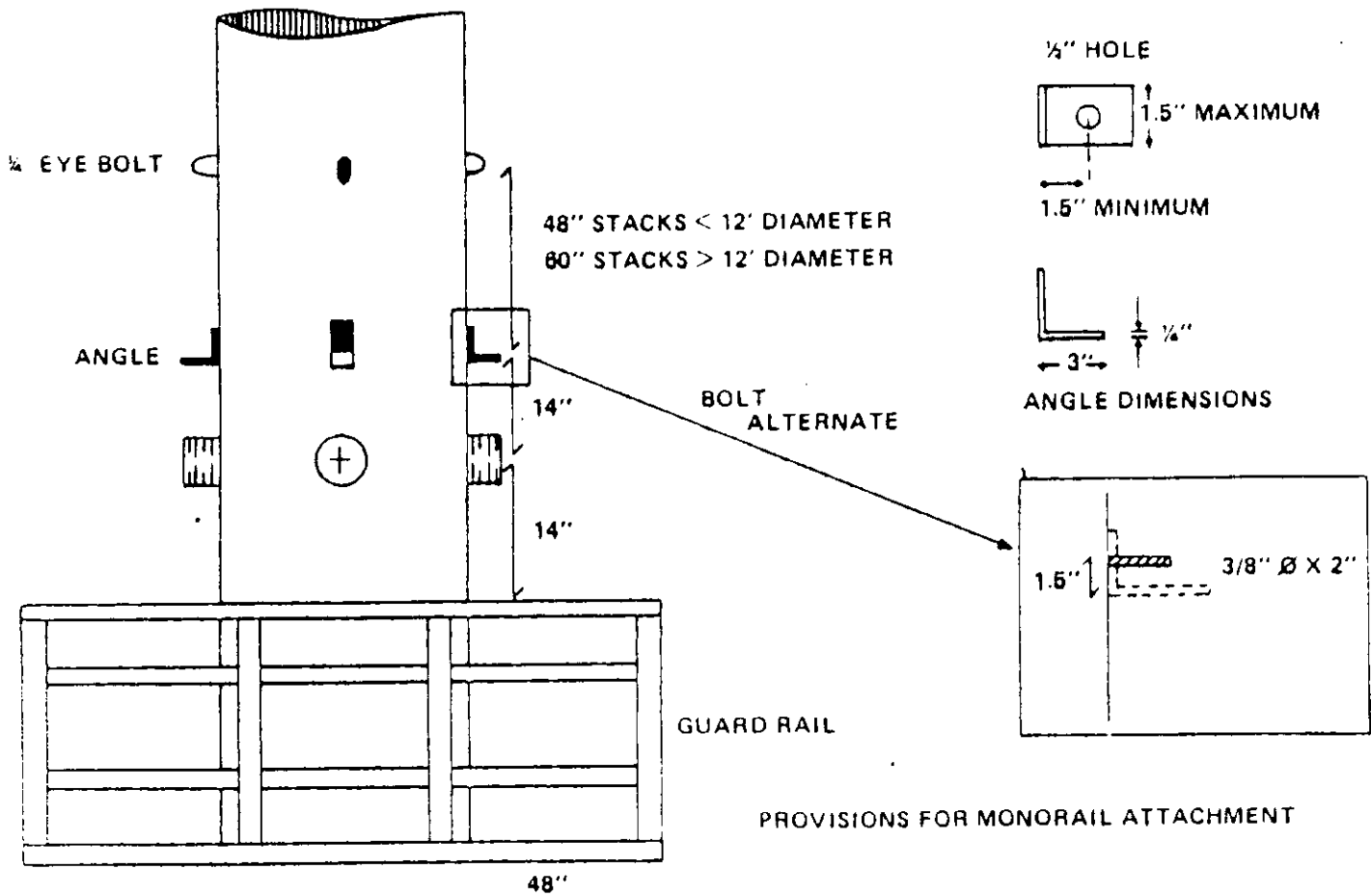
See Draft Permit.

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.

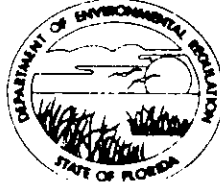
AN EYEBOLT AND ANGLE SHALL BE ATTACHED DIRECTLY ABOVE EACH PORT OF VERTICAL STACKS AND ABOVE EACH VERTICAL SET OF PORTS FOUND ON THE SIDES OF HORIZONTAL DUCTWORK 1.8 WORKING PLATFORMS. THE DIMENSIONS AND PLACEMENT OF THESE FIXTURES ARE SHOWN IN FIGURE 1-1.



IF EYEBOLT IS MORE THAN 120 INCHES ABOVE THE PLATFORM A PIECE OF CHAIN SHOULD BE ATTACHED TO IT TO BRING THE POINT OF ATTACHMENT WITHIN SAFE REACH. THE EYEBOLT SHOULD BE CAPABLE OF SUPPORTING A 500 POUND WORKING LOAD.



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



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

## DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO. AC 53- 33818

COUNTY: Polk

PROJECT: Sulfuric Acid Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of a 2,200 ton per day sulfuric acid plant located on Highway 630 West in Ft. Meade, Polk County, Florida. The UTM coordinates of the proposed plant are 416.17 (Zone 17)E and 3068.79 N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted in "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. U.S.S. Agri-Chemicals Company, Responses to Technical Discrepancies, September 25, 1980.

### 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

PERMIT NO.:  
APPLICANT:

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33818  
APPLICANT: U.S.S. Agri-Chemicals

Specific Conditions

Sulfuric Acid Plant

1. Operation time will be 8,736 hours per year.
2. Maximum production rate will be 2200 tons of 100 percent  $H_2SO_4$  per day for each sulfuric acid plant.
3. The maximum amount of sulfur dioxide emitted will be 4 lbs.  $SO_2$ /Ton 100%  $H_2SO_4$  and 367  $lbSO_2/hr.$  per train.
4. The amount of  $H_2SO_4$  mist emitted will be a maximum of 0.15 lb. acid mist/Ton 100%  $H_2SO_4$  and 13.8 lb/hr mist per train.
5. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the applicant. The pollutant gas used to prepare calibration gas mixture under paragraph 2.1 Performance Specification 2 and for calibration checks under 60.13(d) to this part, shall be sulfur dioxide ( $SO_2$ ). Reference Method 8 shall be used for conducting monitoring system performance evaluations under 60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span shall be set at 1000 ppm of sulfur dioxide.
6. The applicant shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/short ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods and calculating the appropriate conversion factor for each eight hour period as follows:  
$$CF = K \frac{(1,000 - 0.015r)}{r-s}$$
7. The applicant shall record all conversion factors and values under paragraph (b) as set forth in 60.84 Subpart H - Standards of Performance for Sulfuric Acid Plant.
8. For the purpose of reports under 60.7(c), periods of excess emission shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under 60.82.

PERMIT NO.: AC 53-33818

APPLICANT: U.S.S. Agri-Chemicals

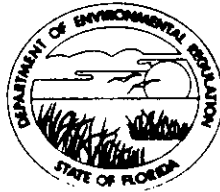
9. Existing sulfuric acid plants permit no. AO 53-4528 will be shut down and any permits for these sources returned to the Department within 3 months of test of the new sulfuric acid plants.
10. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites used by contractors, will be taken by the Permittee.
11. Construction should reasonably conform to the plans submitted in the application.
12. The applicant should report any delays in construction and completion.
13. Before the construction permit expires the sulfuric acid plant will be tested for sulfur dioxide and sulfuric acid mist. Test procedures will be EPA reference methods 1, 2, 3, 8, and 9 as published in 40 CFR 60, Appendix A, dated July 1, 1978 or by any other State approved method. Minimum sample volume and time per run will be as defined in the applicable NSPS. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity +10%.
14. The applicant will demonstrate compliance with the condition of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.
15. Upon obtaining and operating permit, the applicant will be required to submit periodic test reports on the actual operation and emissions of the facility.
16. Stack sampling facilities will include the eyebolt and angle described in the attached figures.
17. Visible emission shall be 10% opacity.

Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

**DEPARTMENT OF ENVIRONMENTAL REGULATION**

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO. AC 53 - 33819

COUNTY: Polk

PROJECT: Sulfuric Acid Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of a 2,200 ton per day sulfuric acid plant located on Highway 630 West in Ft. Meade, Polk County, Florida. The UTM coordinates of the proposed plant are 416.17 (Zone 17)E and 3068.79 N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted in "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. U.S.S. Agri-Chemicals Company, Responses to Technical Discrepancies, September 25, 1980.

**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

PERMIT NO.:  
APPLICANT:

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33819  
APPLICANT: U.S.S. Agri-Chemicals

Specific Conditions

Sulfuric Acid Plant

1. Operation time will be 8,736 hours per year.
2. Maximum production rate will be 2200 tons of 100 percent  $H_2SO_4$  per day for each sulfuric acid plant.
3. The maximum amount of sulfur dioxide emitted will be 4 lbs.  $SO_2$ /Ton 100%  $H_2SO_4$  and 367  $lbSO_2/hr.$  per train.
4. The amount of  $H_2SO_4$  mist emitted will be a maximum of 0.15 lb. acid mist/Ton 100%  $H_2SO_4$  and 13.8 lb/hr mist per train.
5. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the applicant. The pollutant gas used to prepare calibration gas mixture under paragraph 2.1 Performance Specification 2 and for calibration checks under 60.13(d) to this part, shall be sulfur dioxide ( $SO_2$ ). Reference Method 8 shall be used for conducting monitoring system performance evaluations under 60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span shall be set at 1000 ppm of sulfur dioxide.
6. The applicant shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/short ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods and calculating the appropriate conversion factor for each eight hour period as follows:
$$CF = K \frac{(1,000 - 0.015r)}{r-s}$$
7. The applicant shall record all conversion factors and values under paragraph (b) as set forth in 60.84 Subpart H - Standards of Performance for Sulfuric Acid Plant.
8. For the purpose of reports under 60.7(c), periods of excess emission shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under 60.82.

PERMIT NO.: AC 53-33819  
APPLICANT: U.S.S. Agri-Chemicals

9. Existing sulfuric acid plants permit no. AO 53-4528 will be shut down and any permits for these sources returned to the Department within 3 months of test of the new sulfuric acid plants.
10. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites used by contractors, will be taken by the Permittee.
11. Construction should reasonably conform to the plans submitted in the application.
12. The applicant should report any delays in construction and completion.
13. Before the construction permit expires the sulfuric acid plant will be tested for sulfur dioxide and sulfuric acid mist. Test procedures will be EPA reference methods 1, 2, 3, 8, and 9 as published in 40 CFR 60, Appendix A, dated July 1, 1978 or by any other State approved method. Minimum sample volume and time per run will be as defined in the applicable NSPS. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity +10%.
14. The applicant will demonstrate compliance with the condition of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.
15. Upon obtaining and operating permit, the applicant will be required to submit periodic test reports on the actual operation and emissions of the facility.
16. Stack sampling facilities will include the eyebolt and angle described in the attached figures.
17. Visible emission shall be 10% opacity.

Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



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



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO. AC 53-33820  
COUNTY: Polk

PROJECT: Phosphoric Acid Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of a Phosphoric Acid Plant to be located on Highway 630 West of Ft. Meade, Polk County, Florida. The UTM Coordinates of the proposed plant are 416.07 (Zone 17) and 3068.70N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted on pages 3 and 4, "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. U.S.S. Agri-Chemicals, Company, Responses to Technical Discrepancies, September 25, 1980.

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

PERMIT NO.:

APPLICANT:

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33820  
APPLICANT: USS Agri-Chemicals

Specific Conditions

1. Maximum production rate will be 770 tons of  $P_2O_5$  per day for each phosphoric acid plant (1,540 tons of  $P_2O_5$  per day for both phosphoric acid plants).
2. Operation time will be 8,736 hours per year.
3. Fugitive emissions in the Phosphoric Acid Plant will be controlled by sealing and venting all fumes from the process and conveying equipment to pollution control equipment.
4. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites used by contractors will be taken by the Permittee.
5. Construction should reasonably conform to the plans submitted in the application.
6. The applicant should report any delays in construction and completion.
7. Before the construction permit expires, the Phosphoric Acid Plant will be sampled for particulate and total fluoride. Test procedures will be EPA reference methods 1, 2, 3, 4, 5, and 13A or 13B as published in 40 CFR 60, Appendix A, dated July 1, 1978, or by any other State approved methods. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity +10%. Flow of the scrubber water (GPM), water pressure and pressure drop across the scrubbers, will be as normally operated and reported, along with the test data and results, to DER. Test results will be the average of 3 valid runs.

Minimum sample time and volume per run will be as defined in the applicable NSPS.

8. The applicant will demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.

PERMIT NO.: AC 53- 33820  
APPLICANT: USS Agri-Chemicals

9. Upon obtaining an operating permit, the applicant will be required to submit periodic test reports on the actual operation and emission of the facility. These reports will give emission test data, emission test results, scrubber parameters (pressure drop and water flow) and phosphoric acid production.
10. Stack sampling facilities will include the eyebolt and angle described in the attached figures.
11. The maximum amount of particulate will be 5.9 lbs./hr. for each train.
12. The maximum amount of total fluoride emitted will be 0.02 lb. F/TP<sub>2</sub>O<sub>5</sub> feed and 0.53 lbs. F/hr. from each reactor stack and 0.36 lb./hr. from the clarification and storage stack.
13. The existing phosphoric acid plants (permit no. AO 53-4563) will be shut down and any operation permit for them returned to the Department within 3 months of start up of the new phosphoric acid plants.
14. The applicant shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range.
15. The applicant shall maintain a daily record of equivalent P<sub>2</sub>O<sub>5</sub> feed by first determining the total mass rate in ton/hr. of phosphorus bearing feed using a monitoring device for measuring mass flow rate which meets the requirements of the above paragraph (14) and then by proceeding according to 60.204(d)(2) Subpart T, Standards of Performance for the Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plant.
16. The applicant shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across the process scrubbing system. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range.

Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2800 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

## DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO. AC 53- 33821  
COUNTY: Polk

PROJECT: Phosphoric Acid Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of a Phosphoric Acid Plant to be located on Highway 630 West of Ft. Meade, Polk County, Florida. The UTM Coordinates of the proposed plant are 416.07 (Zone 17) and 3068.78N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted on pages 3 and 4, "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. U.S.S. Agri-Chemicals, Company, Responses to Technical Discrepancies, September 25, 1980.

### 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

PERMIT NO.:

APPLICANT:

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33821  
APPLICANT: USS Agri-Chemicals

Specific Conditions

1. Maximum production rate will be 770 tons of  $P_2O_5$  per day for each phosphoric acid plant (1,540 tons of  $P_2O_5$  per<sup>2</sup>day for both phosphoric acid plants).
2. Operation time will be 8,736 hours per year.
3. Fugitive emissions in the Phosphoric Acid Plant will be controlled by sealing and venting all fumes from the process and conveying equipment to pollution control equipment.
4. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites used by contractors will be taken by the Permittee.
5. Construction should reasonably conform to the plans submitted in the application.
6. The applicant should report any delays in construction and completion.
7. Before the construction permit expires, the Phosphoric Acid Plant will be sampled for particulate and total fluoride. Test procedures will be EPA reference methods 1, 2, 3, 4, 5, and 13A or 13B as published in 40 CFR 60, Appendix A, dated July 1, 1978, or by any other State approved methods. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity +10%. Flow of the scrubber water (GPM), water pressure and pressure drop across the scrubbers, will be as normally operated and reported, along with the test data and results, to DER. Test results will be the average of 3 valid runs.

Minimum sample time and volume per run will be as defined in the applicable NSPS.

8. The applicant will demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.

PERMIT NO.: AC 53-33821  
APPLICANT: USS Agri-Chemicals

9. Upon obtaining an operating permit, the applicant will be required to submit periodic test reports on the actual operation and emission of the facility. These reports will give emission test data, emission test results, scrubber parameters (pressure drop and water flow) and phosphoric acid production.
10. Stack sampling facilities will include the eyebolt and angle described in the attached figures.
11. The maximum amount of particulate will be 5.9 lbs./hr. for each train.
12. The maximum amount of total fluoride emitted will be 0.02 lb. F/TP<sub>2</sub>O<sub>5</sub> feed and 0.53 lbs. F/hr. from each reactor stack and 0.36 lb./hr. from the clarification and storage stack.
13. The existing phosphoric acid plants permit no. AO 53-4563 will be shut down and any operation permit for them returned to the Department within 3 months of start up of the new phosphoric acid plants.
14. The applicant shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range.
15. The applicant shall maintain a daily record of equivalent P<sub>2</sub>O<sub>5</sub> feed by first determining the total mass rate in ton/hr. of phosphorus bearing feed using a monitoring device for measuring mass flow rate which meets the requirements of the above paragraph (14) and then by proceeding according to 60.204(d)(2) Subpart T, Standards of Performance for the Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plant.
16. The applicant shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across the process scrubbing system. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range.

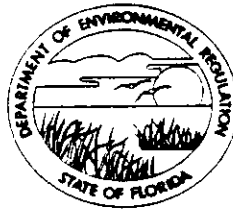
Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



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



BOB GRAHAM  
GOVERNOR

JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

## DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO.AC 53-33822

COUNTY: Polk

PROJECT: Auxiliary Boiler

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of an auxiliary boiler to serve two identical sulfuric acid plants located on Highway 630 West of the Meade, Polk County, Florida. The UTM coordinates of the proposed plant are 416.7 (Zone 17) and 3068.65N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted on page 3 "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. U.S.S. Agri-Chemicals, Company, Responses to Technical Discrepancies, September 25, 1980.

### 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

PERMIT NO.: AC 53-33822  
APPLICANT: U.S.S. Agri-Chemicals

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33822  
APPLICANT: U.S.S. Agri-Chemicals

Specific Conditions

Auxiliary Boiler

1. Auxiliary boiler operation is limited to 24 hours per day, 7 days a week and 5 weeks per year.
2. The fuel used to fire the boiler will be natural gas or No. 2 fuel oil with a sulfur content of 0.5% S. Maximum.
3. The Department will be notified if the auxiliary boiler operates more than 840 hour/year.
4. Visible emissions shall be 20 percent opacity except for up to 27% opacity for one 6 minute period per hour.
5. The maximum amount of emissions emitted from the boiler stack will be:

Pollutant	Fuel	Emission Rate
SO <sub>2</sub>		0.51 lbs. SO <sub>2</sub> /MMBTU
NO <sub>x</sub>	Fuel oil No. 2	0.3 lbs. NO <sub>x</sub> /MMBTU
Particulate		0.2 lbs. particulate/MMBTU
Visible Emission		Opacity (Maximum 20%)

6. Before the construction permit expires, the boiler will be tested for sulfur dioxide and visible emissions. Test procedures will be EPA reference methods 1, 2, 3, 6 and 9 as published in 40 CFR 60, Appendix A, dated July 1, 1978, or by any other State approved method. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity +10%.
7. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites used by contractors, will be taken by the Permittee.
8. Construction should reasonably conform to the plans submitted in the application.
9. The applicant should report any delay in construction and completion.

PERMIT NO.: AC 53-33822  
APPLICANT: U.S.S. Agri-Chemicals

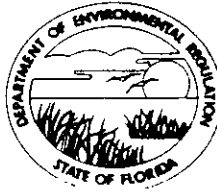
10. The applicant will demonstrate compliance with the condition of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.
11. Upon obtaining an operating permit, the applicant will be required to submit periodic reports on the actual operation and emission of the facility. These reports will give emission test data, emission test results and hours of production.

Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR  
JACOB D. VARN  
SECRETARY

STATE OF FLORIDA

**DEPARTMENT OF ENVIRONMENTAL REGULATION**

APPLICANT: U.S.S. Agri-Chemicals  
P. O. Box 150  
Bartow, Florida 33830

PERMIT/CERTIFICATION  
NO. AC 53-33868

COUNTY: Polk

PROJECT: Phosphoric Acid  
Plant Storage Area 17-2

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, 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:

For the construction of a scrubber to serve the Phosphoric Acid Plant storage area which is located on Highway 630 West of Ft. Meade, Polk County, Florida. The UTM Coordinates of the proposed plant are 416.07 (Zone 17)E and 3068.78N.

Construction shall be in accordance with the attached permit application, and plans, documents and drawings except as otherwise noted on page 3, "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER Form 17-1.122(16).
2. USS Agri-Chemicals Company, Responses to Technical Discrepancies, September 25, 1980.

**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

PERMIT NO.: AC 53-33868  
APPLICANT: U.S.S. Agri-Chemicals

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)

SPECIFIC CONDITIONS:

PERMIT NO.: AC 53-33868  
APPLICANT: U.S.S. Agri-Chemicals

Specific Conditions

1. Maximum fluoride emissions from the storage area will be 0.36 lb/hr. for both trains.
2. Reasonable precautions to prevent fugitive particulate emissions during construction such as coating or spraying roads and construction sites by contractors will be taken by the Permittee.
3. Construction should reasonably conform to the plans submitted in the application.
4. The applicant should report any delays in construction and completion.
5. Before the construction permit expires, the phosphoric acid plant storage area scrubber will be sampled for fluoride. Test procedures will be EPA reference methods 1, 2, 3, 4, 13A or 13B as published in 40 CFR 60, Appendix A, dated July 1, 1978 or by any other State approved methods. DER will be notified 30 days in advance of the compliance test. The test will be conducted at permitted production capacity  $\pm 10\%$ .
6. The applicant will demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit to the Tampa District office prior to 90 days of the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until the expiration date or issuance of an operating permit.
7. Upon obtaining and operating permit, the applicant will be required to submit periodic test reports on the actual operation and emissions of the facility. These reports will give emission test data, emission test results, scrubber parameters (pressure drop and water flow) and phosphoric acid production.

Expiration Date: September 1983

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION