

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Swachmann, Secretary

John Shearer, Assistant Secretary

December 21, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. C. M. Farris
General Manager
Farmland Industries, Inc.
P. O. Box 960
Bartow, Florida 33830

Dear Mr. Farris:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Farmland Industries to construct a 2000 tons per day sulfuric acid plant at their facility near Bartow, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Regulation.

Sincerely,

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

CHF/JR/t

Attachments

cc: B. Thomas, SW District
R. Tedder, P.E.
M. Armentrout, EPA

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. C. M. Farris General Manager Farmland Industries, Inc. P. O. Box 960 Bartow, FL 33830	4. Article Number P 938 762 792 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X Linda Thompson</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent <i>X</i>	
7. Date of Delivery <i>12/28/89</i>	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 938 762 792

RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

Sent to	
Mr. C. M. Farris, Farmland Industries	
Street and No. P. O. Box 960	
P. O. State and ZIP Code Bartow, FL 33830	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 12-22-89 Permit: AC 53-171751 PSD-FL-143	

PS Form 3800, June 1985

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Farmland Industries, Inc.
P. O. Box 960
Bartow, Florida 33830

DER File No. AC 53-171751
PSD-FL-143

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Farmland Industries, Inc. applied on October 23, 1989, to the Department of Environmental Regulation for a permit to construct a 2000 tons per day sulfuric acid plant at their facility near Bartow, Polk County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

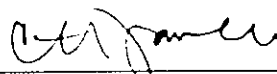
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copies furnished to:

B. Thomas, SW District
R. Tedder, P.E.
M. Armentrout, EPA

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 12-22-89.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

Kuni Joken
Clerk

12-22-89
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Farmland Industries, Inc. to construct a 2000 tons per day sulfuric acid plant at their facility near Bartow, Polk County, Florida. A determination of Best Available Control Technology (BACT) was required. The proposed project is subject to Prevention of Significant Deterioration regulations and federal new source performance standards. The new sulfuric acid plant (No. 5) will replace the existing No. 1 and No. 2 sulfuric acid plants. The project will increase total sulfuric acid production at the Farmland facility by approximately 8% and is not expected to result in significant deterioration of the environment. No PSD increment will be consumed since the existing No. 1 and No. 2 sulfuric acid plants will be shut down. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Southwest District Office
4520 Oak Fair Blvd.
Tampa, Florida 33610-7347

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination. Furthermore, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

Farmland Industries, Inc.
Green Bay Complex
Bartow, Polk County, Florida

Sulfuric Acid Plant No. 5
Permit No. AC 53-171751
PSD-FL-143

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

December 21, 1989

I. Application

A. Applicant

Farmland Industries, Inc.
Post Office Box 960
Bartow, Florida 33830

B. Request

The Department received an application on October 23, 1989, for a permit to construct a 2,000 TPD sulfuric acid plant (No. 5) at the applicant's phosphate complex near Bartow, Florida. After receiving additional information on November 29, the application was deemed complete on December 1, 1989.

C. Classification/Location

The applicant's facility (SIC Code 2819) is located off State Road 640 near Bartow, Florida, with latitude of 27°50'37"N and longitude of 81°56'05" W. The UTM coordinates of the site are: Zone 17, 409.5 km E and 3079.5 km N.

II. Project Description/Emissions

It is proposed to construct a new 2,000 TPD double absorption sulfuric acid plant (No. 5) to replace the existing No. 1 (800 TPD) and No. 2 (800 TPD) sulfuric acid plants. The new plant will have a 38 megawatt cogeneration facility powered solely by excess steam from the new plant. Plant No. 1 will be shut down permanently. Plant No. 2 was permanently shut down in March of 1985. Plants No. 3 and No. 4, constructed in 1972 and expanded in 1982 with capacities of 1600 TPD each, will continue to operate.

The proposed project will increase the total sulfuric acid capacity at this facility from 4800 TPD to 5200 TPD as shown below:

<u>Plant</u>	<u>Yr Constructed</u>	<u>Type</u>	<u>Capacity</u>	<u>Status</u>
1	1965	Single Absorption	800 TPD	To be shut down
2	1965	Single Absorption	800 TPD	Shut down 1985
3	1972/82	Double Absorption	1600 TPD	Operate
4	1972/82	Double Absorption	1600 TPD	Operate
5	1990	Double Absorption/ Cogeneration	2000 TPD	Operate

Annual emission changes resulting from the new construction and associated shutdowns are summarized in the following table. The existing Green Superphosphoric Acid Plant (GSPA), constructed in 1987, is included in the analysis since its NOx emissions are considered contemporaneous with the increase from the proposed No. 5 sulfuric acid Plant.

	Air Pollutant (tons/yr)			GSPA	Net Increase	Signif. Increase
	1	2	5			
Sulfuric Acid Plants						
SO ₂						
Present	700	700				
Proposed	(700)	(700)	1460		60	40
Acid Mist						
Present	7.5	7.5				
Proposed	(7.5)	(7.5)	54.8		39.8	7
NO _x						
Present	25.2	25.2*		64.8		
Proposed	(25.2)	(25.2)	43.4	64.8	57.8	40

*Permanently shut down in 1985 but included for contemporaneous emission changes per F.A.C. Rule 17-2.500(2)(e)3.

III. Rule Applicability

The construction permit application is subject to review under Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4. The facility is located in an area classified as attainment for each of the regulated air pollutants. The proposed major source is subject to the preconstruction review requirements of F.A.C. Rule 17-2.500, Prevention of Significant Deterioration (PSD). The proposed increases in emissions exceed significant levels set forth in Table 500-2 of F.A.C. Rule 17-2.500. Preconstruction review must include a determination of best available control technology (BACT), good-engineering practice stack height, ambient impact analysis, impact on soils, vegetation, and visibility. F.A.C. Rules 17-2.660, Table 660-1, Section 60.80, and 17-2.700, Table 700-1, apply to this new major source. Emissions will be limited by the federal new source performance standards for sulfur dioxide, acid mist and visible emissions, and the BACT determination for NO_x.

IV. Source Impact Analysis

A. Ambient Air Analysis

Analysis of ambient air impact from the proposed source generally involves assessment of existing air quality, a PSD increment analysis, and an ambient air quality standards analysis. Existing air quality must be established by monitoring data if the emissions from the new source will have an impact equal to or greater than that listed in F.A.C. Rule 17-2.500, Table 500-3, De Minimus Ambient Impacts. However, if it is shown, as here, that the net increase in ambient concentrations of applicable pollutants will be less than the de minimus concentrations listed in Table 500-3, the source is exempt from ambient monitoring as provided by F.A.C. Rule 17-2.500(3)(e). The following table summarizes results of air quality analysis for the proposed project:

	Ambient Impacts (ug/m ³)	Signif. Impact	De Minimus Impact
Sulfur Dioxide			
3-hr	0.016	25.0	N/A
24-hr	0.0002	5.0	13.0
Annual	(less than 0)	1.0	N/A
Nitrogen Oxides (annual)	3.9	1.0*	14.0
Acid Mist (24-hr)	3.7	N/A	4.8**

*The impact is significant as defined by F.A.C. Rule 17-2.100(173) but the impact from all sources surrounding the project site is below 10% of the ambient air quality standard for NOx.

**No de minimus or significant impact levels have been established for acid mist. This figure was calculated based on adjusted threshold limit value (TLV) in order to arrive at an acceptable ambient level (AAL).

The sulfur dioxide modeling data from the Industrial Source Complex-Short Term (ISCST) model indicate that the net impacts of increased emissions from the No. 5 plant, adjusted for the shutdown of the No. 1 and No. 2 plants, are below the de minimus impact levels. Modeling appears to have been carried out in accordance with EPA guidelines using actual emission offsets from the No. 1 and No. 2 plants. Although modeling results indicated that a net annual improvement in the sulfur dioxide ambient concentration will be realized, this is questionable since an additional 60 tons per year will be emitted. However, net impact will be very minor and therefore, a PSD increment analysis is not required.

Nitrogen oxides modeling using the Industrial Source Complex-Long Term (ISCLT) model showed that the No. 5 sulfuric acid plant, together with contemporaneous emissions from the GSPA plant, will have a significant impact as defined by F.A.C. Rule 17-2.100(173) at a distance of 0.3 kilometers from the plant but will not cause an exceedance of the ambient air quality standard. When modeled with all other sources of nitrogen oxides capable of affecting the area, this project is expected to result in a maximum concentration of only 7.6 micrograms per cubic meter (7.6% of the ambient air quality standard) in the project area.

Sulfuric acid mist emissions were evaluated differently since no significant impact levels, PSD increments or ambient air quality standards exist for this pollutant. An acceptable ambient level (AAL) of 4.8 micrograms per cubic meter was derived by adjusting the Threshold Limit Value (TLV) to reflect ambient exposure rather than occupational exposure. The ISCST air quality modeling shows that the maximum expected 24-hour average sulfuric acid mist impact resulting from operation of sulfuric acid plants No. 3, 4 and 5 will be 3.7 micrograms per cubic meter at a distance of 1.5 kilometers from the plants.

B. Impact on Soils, Vegetation, Visibility and Growth

The impact of sulfur dioxide and sulfuric acid mist emissions is predicted to be very minor and therefore, is not expected to have any harmful effects on soils or vegetation. Likewise, the increased NOx emissions are not expected to harm soils, vegetation, or impair visibility of any nearby area. The only growth-related impact is expected to be a slight increase in truck and rail activity associated with the eight percent production increase.

C. Good Engineering Practice Stack Height

The applicant plans to construct a stack that is 150 feet above-grade which is at least 2.5 times the height of nearby structures. This complies with good engineering practice stack height criteria listed in F.A.C. Rule 17-2.270(3).

V. Conclusion

Based on the information provided by Farmland Industries, the Department has reasonable assurance that the proposed No. 5 sulfuric acid plant and cogeneration facility, as described in this evaluation and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

John Thomas
12/22/89

Best Available Control Technology (BACT) Determination
Farmland Industries, Inc.
Polk County

The applicant proposes to construct a 2,000 tons per day double absorption sulfuric acid plant with cogeneration capability at their existing facility in Polk County. The project involves a sulfuric acid production increase of 400 tons per day since the existing sulfuric acid plants No. 1 and No. 2 will cease operation permanently (1600 tons per day).

The proposed project will result in a significant increase in emissions of SO₂, acid mist, and NO_x. The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with F.A.C. Rule 17-2.500(5).

The BACT review is part of the PSD review requirements in accordance with F.A.C. Rule 17-2.500(5)(c).

Date of Receipt of a BACT application:

October 23, 1989

BACT Determination Requested by the Applicant:

The BACT determination requested by the applicant is presented below:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4 lb/ton of 100% H ₂ SO ₄ produced
Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity
NO _x	0.12 lb/ton

Basis of Review:

This determination was based upon comments received from the applicant, EPA Region IV, and the Bureau of Air Regulation.

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination will be based on the maximum degree of reduction of each pollutant emitted which the Department (DER), on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production

processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

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

BACT Determined by DER:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4.0 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity
Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
NO _x	0.12 lb/ton

BACT Determination Rationale

DER's BACT determination is the same as that proposed by the applicant, determinations completed by other states, and Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process in itself is the control technology for SO₂ and acid mist. The emission limits reflect conversion efficiency of around 99.7% of SO₂ to H₂SO₄. High efficiency mist eliminators are considered BACT for acid mist. A review of BACT/LAER Clearinghouse indicates that

the double absorption technology, and the use of high efficiency mist eliminators is representative of BACT using the top down approach.

A review of the BACT/LAER Clearinghouse does not indicate any control technologies or emission limits for nitrogen oxides emissions from sulfuric acid plants. The proposed emission level, equivalent to 0.03 pounds per million Btu, is well below the BACT levels that are typically established for sources emitting nitrogen oxides and is hence deemed BACT for this facility.

Environmental Impact Analysis

The impact analysis for the BACT determination is based on 8760 hrs/yr operation. The ambient air quality impact analysis resulted in the following for SO₂ and NO_x emissions:

<u>Averaging Time</u>	<u>Predicted Impact (ug/m³)</u>	<u>Deminimus (ug/m³)</u>	<u>Fla. AAQS (ug/m³)</u>
<u>SO₂</u>			
Annual	(less than 0)	N/A	60
24-hr	0.0002	13.0	260
3-hr	0.016	N/A	1300
<u>NO_x</u>			
Annual	3.9	14.0	100

Conclusion

The incremental impact from SO₂ due to the proposed modification is insignificant. For NO_x emissions, the impacts are also well below the standard. As this is the case, the impacts associated with facility supports the Department's determination that the emission limits established herein represent BACT.

Details of the Analysis May be Obtained by Contacting:

Barry Andrews, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

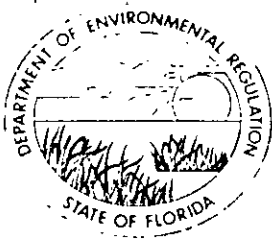
Approved by:

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

Dale Twachtman, Secretary
Dept. of Environmental Regulation

Date 1989

Date 1989



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:
Farmland Industries, Inc.
P. O. Box 960
Bartow, FL 33830

Permit Number: AC 53-171751
PSD-FL-143
Expiration Date: Sept. 30, 1991
County: Polk
Latitude/Longitude: 27°50'37"N
81°56'05"W
Project: Sulfuric Acid Plant
No. 5

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of Sulfuric Acid Plant No. 5. The project will be located at the permittee's existing facility near Bartow, Polk County, Florida. The UTM coordinates are Zone 17, 409.5 km East and 3079.5 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application to construct received October 23, 1989.
2. DER's letter of incompleteness dated November 21, 1989.
3. EPA's letter dated November 29, 1989.
4. Koogler & Associates letter dated November 29, 1989.

PERMITTEE:
Farmland Industries, Inc.

Permit Number: AC 53-171751
PSD-FL-143
Expiration Date: Sept. 30, 1991

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE:
Farmland Industries, Inc.

Permit Number: AC 53-171751
PSD-FL-143
Expiration Date: Sept. 30, 1991

GENERAL CONDITIONS:

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

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

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

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

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

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

PERMITTEE:
Farmland Industries, Inc.

Permit Number: AC 53-171751
PSD-FL-143
Expiration Date: Sept. 30, 1991

GENERAL CONDITIONS:

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

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

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

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

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

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

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GENERAL CONDITIONS:

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

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

SPECIFIC CONDITIONS:

1. The construction and operation of the No. 5 sulfuric acid plant shall be in accordance with the capacities and specifications stated in the application.

2. The maximum production rate of the No. 5 sulfuric acid plant shall not exceed 2000 tons per day based on 100% H₂SO₄.

3. Sulfur dioxide emissions shall not exceed:

4 lbs/ton of 100% sulfuric acid produced
333.3 lbs/hr
1460 tons/yr

4. Sulfuric acid mist emissions shall not exceed:

0.15 lb/ton of 100% sulfuric acid produced
12.5 lbs/hr
54.8 tons/yr

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SPECIFIC CONDITIONS:

5. Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 1005 sulfuric acid produced
10.0 lbs/hr
43.8 tons/year

6. Visible emissions shall not exceed 10% opacity.

7. Sulfuric acid plants No. 1 and No. 2 shall permanently cease operation within 90 days after the No. 5 sulfuric acid plant begins operation.

8. A continuous emission monitor shall be used to monitor sulfur dioxide, in accordance with F.A.C. Rule 17-2.710. Initial and annual compliance tests shall be conducted using:

EPA Method 7 for nitrogen oxides
EPA Method 8 for sulfur dioxide and acid mist
DER Method 9 for visible emissions

9. The compliance tests shall be conducted within 30 days after operation begins. The Department's Southwest District office shall be notified in writing 15 days prior to source testing and at least 5 days prior to initial startup. Written reports of the tests shall be submitted to that office within 45 days of test completion.

10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration date of the permit (F.A.C. Rule 17-4.090).

11. An application for an operation permit must be submitted to the Department's Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. The operation permit application shall include a set of conditions acceptable to the Department for sequential startup/shutdown of the permittee's three sulfuric acid plants. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

PERMITTEE:
Farmland Industries, Inc.

Permit Number: AC 53-171751
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Issued this _____ day
of _____, 1989

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary