Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

December 21, 1995

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Charles Jenkins
Environmental Coordinator
Farmland Hydro, L.P.
Post Office Box 906
Bartow, Florida 33830

Dear Mr. Jenkins:

Re: No. 5 SAP Plant
AC53-185490/PSD-FL-143A
Request to Amend permit

The Department hereby amends the above referenced permit as follows:

Specific Condition No. 8:

From:

A continuous emission monitor shall be used to monitor sulfur dioxide, in accordance with F.A.C. Rule 17-2.701. Initial and annual compliance tests shall be conducted using:

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

To:

A continuous emission monitor shall be used to monitor sulfur dioxide, in accordance with F.A.C. Rule **62-296.402. Testing for nitrogen oxides shall be done prior to renewal of each operating permit using EPA Method 7E.** Initial and annual compliance tests shall be conducted using:

EPA Method 8 for sulfur dioxide and acid mist
EPA Method 9 for visible emissions

A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC53-185490/PSD-FL-143A.

Sincerely,

for Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **PERMIT AMENDMENT** and all copies were mailed by certified mail before the close of business on 12-21-95 to the listed persons.

Clerk Stamp
FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.

Kyni Doben 12-21-95
Clerk Date

Copies to be furnished to:

Jerry Kissel, SWD
Jewell Harper, EPA
Roy Harwood, Polk Co

BEST AVAILABLE COPY

Z 127 633 225

Receipt for Certified Mail

UNITED STATES POSTAL SERVICE

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to: Charles Jenkins
Street and No.: Fairland Hydro
P.O., State and ZIP Code: Bartow, Fl

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	12-21-95

AC53-185490
PSD-Fl-143A

PS Form 3800, March 1993

receive the
an extra

Is your RETURN ADDRESS completed on the reverse side?

- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Charles Jenkins, E.C.
Fairland Hydro, LP
P O BOX 906
Bartow, Fl 33830

4a. Article Number
Z 127 633 225

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12/27/95

5. Signature (Addressee)
Linda Thompson

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 DOMESTIC RETURN RECEIPT

Florida Department of
Environmental Protection

Memorandum

TO: C. H. Fancy

FROM: Martin Costello MC 12/18/95

DATE: December 19, 1995

SUB: No. 5 SAP Plant
AC53-185490/PSD-FL-143A
Request to Amend permit

Attached for your review and approval is a permit amendment which reduces the testing frequency for NO_x.

If you have any questions, I will be glad to discuss the details.

MC/h

Farmland Hydro, L.P.

Charles W. Jenkins
Manager
Environmental/Safety Services

Green Bay Plant
County Road 640
Post Office Box 960
Bartow, Florida 33831
Tele: 813 533-1141
Fax: 813 533-8793

October 25, 1995

Marty Costello
Mr. John Reynolds
Department of Environmental Protection
Bureau of Air Regulations
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: AFFIDAVIT OF PUBLICATION

Dear Mr. Reynolds:

Please find enclosed the Affidavit of Publication of Intent to Issue. This is a Permit Amendment to Sulfuric Acid Permit ~~#AO53-200485~~, AIRS #1050053-005.
AC 53-185490 / PSD-FL-193A

If you have any questions, please contact me at (941) 533-1141, Ext. 334.

Sincerely,

Charles W. Jenkins
Manager,
Environmental and Safety Services

CWJ/ra/cwj171.95

Enclosures

CC: Merle Farris

AFFIDAVIT OF PUBLICATION

THE LEDGER
Lakeland, Polk County, Florida

Case No .....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Robert Lee, who on oath says that he is Classified Manager of The Ledger, a daily newspaper published in Polk County, Florida; that the attached copy of advertisement, being a

..... Notice of Intent .....

in the matter of .....

..... AC 53-185490 .....

in the .....

Court, was published in said newspaper in the issues of .....

...October 20,.....

1995 .....

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed ..... Classified Advertising Manager

by Robert E. Lee who is personally known to me

Sworn to and subscribed before me this .....20th.....

day of .....October..... A.D. 19 .....95.....

(Seal) ..... Notary Public

BARBARA THIGPEN

My Commission Expires .....

Order # 552382

NOTARY PUBLIC STATE OF FLORIDA
OFFICIAL NOTARY SEAL
BARBARA THIGPEN
COMMISSION NUMBER
CC427638
MY COMMISSION EXP.
DEC. 19,1998

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT
AC53-185490/PSD-FL-143A

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit amendment to Farmland Hydro, L.P., Post Office Box 906, Bartow, Florida, 33830. The Department intends to reduce the required frequency of NO_X emission testing at sulfuric acid plant No. 5 located at the company's phosphate fertilizer complex on C.R. 640 West near Bartow, Florida. There will be no change in emissions as a result of this amendent since NO_X emissions are low, not subject to rule, and not affected by testing frequency.

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 (F.S.). 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 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, F.S.

The Petition shall contain the following information: (a) The name, address, and the 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 warrants 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/request 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, Florida Administrative Code.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33619

Any person may send written comments on the proposed action to Administrator, New Source Review Section at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

F406 - 10-20; 1995

F 406

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

October 7, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Charles Jenkins
Environmental Coordinator
Farmland Hydro, L.P.
Post Office Box 906
Bartow, Florida 33830

Dear Mr. Jenkins:

Re: No. 5 Sulfuric Acid Plant (SAP) Plant
Amendment to AC53-185490/PSD-FL-143A

Attached is one copy of the Proposed Permit Amendment, Intent to Issue and Public Notice of Intent to Issue Permit Amendment for the above referenced emissions unit.

Please submit any comments you may have concerning the Department's proposed action to Mr. A. A. Linero, P.E., Administrator at the above address. If you have any questions, please call Mr. Martin Costello, P.E. or Mr. Linero at (904) 488-1344.

Sincerely,

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

CHF/mc/t

cc: Jerry Kissel, SWD
Jewell Harper, EPA
Roy Harwood, Polk Co.

Z 127 632 536

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: Charles Jenkins	
Street and No. Fairland Hydro	
P.O., State and ZIP Code Barton FL	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 10-11-95	

No. 5 SAD
AC53-105490/
PSD-FI-143A

PS Form **3800**, March 1993

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Charles Jenkins, EC
Fairland Hydro, LP
PO Box 906
Barton, FL 33830

4a. Article Number
Z 127 632 536

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
10/16/95

5. Signature (Addressee)
Linda Thompson

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit Amendment

DEP File Nos. AC53-185490
PSD-FL-143A
Polk County

Mr. Charles Jenkins
Environmental Coordinator
Farmland Hydro, L.P.
Post Office Box 906
Bartow, Florida 33830
_____/

INTENT TO ISSUE

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit amendment for the applicant's sulfuric acid plant (SAP) No. 5 as detailed in the application/ request specified above for the reasons stated in the Preliminary Determination and discussion below.

The applicant, Farmland Hydro, L.P., requested that the Department allow reduction of the frequency of NO_x emission testing at sulfuric acid plant No. 5 located at its phosphate fertilizer complex on C.R. 640 West near Bartow, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.). The project is not exempt from permitting procedures. The Department has determined that a permit amendment is required for the proposed work.

Pursuant to Section 403.815, F.S., and Rule 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit Amendment. 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's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, 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 amendment.

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

Intent to Issue
Farmland Hydro, L.P.
AC 53-185490-PSD-FL-143A

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, F.S. 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 their 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, F.S.

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 intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application/ request 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 receipt of this intent 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

Intent to Issue
Farmland Hydro, L.P.
AC 53-185490-PSD-FL-143A

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 PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **INTENT TO ISSUE PERMIT AMENDMENT** all copies were mailed by certified mail before the close of business on 10-11-95 to the listed persons.

Clerk Stamp
FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

10-11-95
Date

Copies furnished to:

Jerry Kissel, SWD
Jewell Harper, EPA
Roy Harwood, Polk Co.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT
AC53-185490/PSD-FL-143A

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit amendment to Farmland Hydro, L.P., Post Office Box 906, Bartow, Florida, 33830. The Department intends to reduce the required frequency of NO_X emission testing at sulfuric acid plant No. 5 located at the company's phosphate fertilizer complex on C.R. 640 West near Bartow, Florida. There will be no change in emissions as a result of this amendment since NOx emissions are low, not subject to rule, and not affected by testing frequency.

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 (F.S.). 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 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, F.S.

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/

request 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, Florida Administrative Code.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33619

Any person may send written comments on the proposed action to Administrator, New Source Review Section at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.

DRAFT

October XX, 1995

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Charles Jenkins
Environmental Coordinator
Farmland Hydro, L.P.
Post Office Box 906
Bartow, Florida 33830

Dear Mr. Jenkins:

Re: No. 5 Sulfuric Acid Plant (SAP) Plant
Amendment to AC53-185490/PSD-FL-143A

The Department hereby amends the above referenced permit as follows:

Specific Condition No. 8:

From:

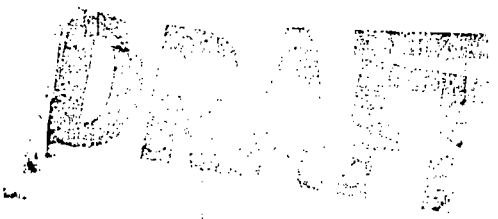
A continuous emission monitor shall be used to monitor sulfur dioxide, in accordance with F.A.C. Rule 17-2.701. Initial and annual compliance tests shall be conducted using:

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

To:

A continuous emission monitor shall be used to monitor sulfur dioxide, in accordance with F.A.C. Rule **62-296.402. Testing for nitrogen oxides shall be done prior to renewal of each operating permit using EPA Method 7E.** Initial and annual compliance tests shall be conducted using:

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



A copy of this amendment letter shall be attached to and shall become a part of Air Construction Permit AC53-185490/PSD-FL-143A.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **PERMIT AMENDMENT** and all copies were mailed by certified mail before the close of business on _____ to the listed persons.

Clerk Stamp
FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to 120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

_____ _____
Clerk Date

Copies to be furnished to:

Jerry Kissel, SWD
Jewell Harper, EPA
Roy Harwood, Polk Co.

Florida Department of
Environmental Protection

Memorandum

TO: C. H. Fancy

THROUGH: A. A. Linero aaj 10/9

FROM: Martin Costello MC 10/6/95

DATE: October 7, 1995

SUBJ: Farmland Hydro, L.P.
No. 5 Sulfuric Acid Plant (SAP) Plant
Amendment to AC53-185490/PSD-FL-143A

Attached for your review and approval is a permit amendment which reduces the test frequency for NO_x emissions to once per operating permit cycle. There will be no changes in emissions since NOx emissions from a SAP are uncontrolled and not affected by testing frequency.

If you have any questions, Martin Costello and I will be glad to discuss the details.

AAL/mc/t

RECEIVED
SEP 27 1995
Bureau of
Air Regulation

MEMORANDUM

TO: Marty Costello, FDEP

FROM: Pradeep Raval

DATE: September 26, 1995

SUBJECT: Extension of 90 Day Time Limit
Farmland Hydro, L.P.

This is a follow up to our telephone conversation today regarding waiver of the 90 day limit for Farmland Hydro, L.P.'s application for permit amendments.

As it is anticipated that the pending issues on this subject will be resolved soon, the attached waiver extension is granted until October 30, 1995.

If you have any questions, please give me a call.

par.
enc.

c: C. Jenkins, Farmland Hydro, L.P.

KOOGLER & ASSOCIATES

ATTACHMENT 1

LIST OF PERMIT AMENDMENTS SUBJECT TO
WAIVER OF THE 90 DAY TIME LIMIT

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Item	Unit/Operation	Construction Permit No.
1.	North MAP/DAP Plant	AC53-210886
2.	No. 5 SAP	AC53-185490

KOOGLER & ASSOCIATES

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Virginia B. Wetherell
Secretary

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) and 403.0876, FLORIDA STATUTES

License (Permit, Certification) Application No. See Attachment 1

Applicant's Name: Farmland Hydro, L.P.

The undersigned has read Sections 120.60(2) and 403.0876, Florida Statutes, and fully understands the applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right under Sections 120.60(2) and 403.0876, Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Sections 120.60(2) and 403.0876, Florida Statutes. Said waiver is made freely and voluntarily by the applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 30th day of October 1995.

The undersigned is authorized to make this waiver on behalf of the applicant.

SIGNATURE

NAME (PLEASE TYPE OR PRINT)

John B. Koogler, Ph.D.,P.E.

MEMORANDUM

TO: Marty Costello, FDEP

FROM: Pradeep Raval

DATE: August 24, 1995

SUBJECT: Extension of 90 Day Time Limit
Farmland Hydro, L.P.

This is a follow up to our conversation yesterday regarding waiver of the 90 day limit for Farmland Hydro, L.P.'s application for permit amendments.

As it is anticipated that the pending issues on this subject will be resolved soon, a waiver extension is granted until September 30, 1995.

If you have any questions, please give me a call.

par.
enc.

c: C. Jenkins, Farmland Hydro, L.P.

ATTACHMENT 1

LIST OF PERMIT AMENDMENTS SUBJECT TO
WAIVER OF THE 90 DAY TIME LIMIT

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Item	Unit/Operation	Construction Permit No.
1.	North MAP/DAP Plant	**AC53-210886**
2.	No. 5 SAP	**AC53-185490**

KOOGLER & ASSOCIATES

Florida Department of
Environmental Protection

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) and 403.0876, FLORIDA STATUTES

License (Permit, Certification) Application No. See Attachment 1

Applicant's Name: Farmland Hydro, L.P.

The undersigned has read Sections 120.60(2) and 403.0876, Florida Statutes, and fully understands the applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right under Sections 120.60(2) and 403.0876, Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Sections 120.60(2) and 403.0876, Florida Statutes. Said waiver is made freely and voluntarily by the applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 30th day of September 1995.

The undersigned is authorized to make this waiver on behalf of the applicant.

SIGNATURE

NAME (PLEASE TYPE OR PRINT)

John B. Koogler, Ph.D., P.E.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 123-94-07

August 21, 1995

Mr. Clair H. Fancy
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Additional Information for
Permit Amendment Request
Farmland Hydro, L.P.

Dear Mr. Fancy:

This is in response to your letter dated June 7, 1995, and discussions last week between Martin Costello and Pradeep Raval regarding the permit amendments for several Farmland sources. The information provided below is in the order of the amendments evaluated by FDEP.

Green SPA Plant, AC53-138041

We hereby withdraw the request for amendment of the Green Superphosphoric Acid Plant permit.

No. 5 SAP, AC53-185490, PSD-FL-143A

We hereby withdraw the request for amendment of the No. 5 Sulfuric Acid Plant permit, except for Specific Condition No. 8. We request that the testing frequency for NOx be reduced from annually to once every five years. It is expected that a corresponding amendment to the operation permit will result in testing for NOx prior to permit renewal only.

Annual NOx testing is not justified for the following reasons:

1. NOx is an uncontrolled byproduct of a manufacturing process which inherently controls the pollutants regulated under 40 CFR 60, Subpart H (sulfur dioxide and sulfuric acid mist).

2. There is no NOx emission standard for sulfuric acid plants.

3. The permit allows adjustment of the NOx emission rate if warranted based on future tests. This provision was included in recognition of Item 1 above. It also reflects the relative unimportance of regulating NOx on this unit.

If you have any questions, please call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par

c: Charles Jenkins, Farmland
Gerald Kissel, FDEP Tampa

185490

2

MEMORANDUM

TO: Marty Costello, FDEP

FROM: Pradeep Raval

DATE: June 22, 1995

SUBJECT: Extension of 90 Day Time Limit

This is a follow up to our conversation this week regarding waiver of the 90 day limit for Farmland Hydro, L.P.'s application for permit amendments.

As it is anticipated that the pending issues on this subject will be resolved soon, the attached waiver extension is granted until August 30, 1995.

If you have any questions, please give me a call.

par.
enc.

c: C. Jenkins, Farmland Hydro, L.P.

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Virginia B. Wetherell
Secretary

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) and 403.0876, FLORIDA STATUTES

License (Permit, Certification) Application No. See Attachment 1

Applicant's Name: Farmland Hydro, L.P.

The undersigned has read Sections 120.60(2) and 403.0876, Florida Statutes, and fully understands the applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right under Sections 120.60(2) and 403.0876, Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Sections 120.60(2) and 403.0876, Florida Statutes. Said waiver is made freely and voluntarily by the applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 30th day of August 1995.

The undersigned is authorized to make this waiver on behalf of the applicant.

SIGNATURE

NAME (PLEASE TYPE OR PRINT)

John B. Koogler, Ph.D., P.E.

ATTACHMENT 1

LIST OF PERMIT AMENDMENTS SUBJECT TO
WAIVER OF THE 90 DAY TIME LIMIT

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Item	Unit/Operation	Construction Permit No.
1.	North MAP/DAP Plant	**AC53-210886**
2.	Green SPA Plant *	**AC53-138041** *
3.	No. 5 SAP	**AC53-185490**

* Farmland will amend this permit if required by FDEP.

KOOGLER & ASSOCIATES

MEMORANDUM

TO: Marty Costello, FDEP

FROM: Pradeep Raval

DATE: June 2, 1995

SUBJECT: Waiver of 90 Day Time Limit

This is a follow up to our conversation this week regarding waiver of the 90 day limit for Farmland Hydro, L.P.'s application for permit amendments.

As it is anticipated that the pending issues on this subject will be resolved soon, the attached waiver is granted until June 30, 1995.

If you have any questions, please give me a call.

par.
enc.

c: C. Jenkins, Farmland Hydro, L.P.

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Virginia B. Wetherell
Secretary

WAIVER OF 90 DAY TIME LIMIT
UNDER SECTIONS 120.60(2) and 403.0876, FLORIDA STATUTES

License (Permit, Certification) Application No. See Attachment 1

Applicant's Name: Farmland Hydro, L.P.

The undersigned has read Sections 120.60(2) and 403.0876, Florida Statutes, and fully understands the applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Sections 120.60(2) and 403.0876, Florida Statutes, waives the right under Sections 120.60(2) and 403.0876, Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Sections 120.60(2) and 403.0876, Florida Statutes. Said waiver is made freely and voluntarily by the applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 30th day of June 1995.

The undersigned is authorized to make this waiver on behalf of the applicant.

SIGNATURE

NAME (PLEASE TYPE OR PRINT)

John B. Koogler, Ph.D.,P.E.

ATTACHMENT 1

LIST OF PERMIT AMENDMENTS SUBJECT TO
WAIVER OF THE 90 DAY TIME LIMIT

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Item	Unit/Operation	Construction Permit No.
1.	North MAP/DAP Plant	AC53-210886
2.	Green SPA Plant	AC53-138041
3.	No. 5 SAP	AC53-185490

KOOGLER & ASSOCIATES

Florida Department of Environmental Regulation
Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

March 5, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. C. M. Farris, General Manager
Farmland Industries
Post Office Box 960
Bartow, Florida 33603

Dear Mr. Farris:

The Department received a letter on behalf of Farmland dated February 14, 1991, requesting modification of Specific Conditions 5 and 8 of PSD-FL-143A (No. 5 Sulfuric Acid Plant). The following shall be changed:

Specific Condition No. 5:

FROM: Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

TO: Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

The above limits, based on a general emission factor of 18 ppm NOx, are subject to revision if sufficient test data indicate that the emission factor is improper.

Specific Condition No. 8:

FROM:

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

TO:

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

Attachment to be Incorporated:

Koogler's letter dated February 14, 1991.

This letter must be attached to the above construction permit AC 53-185490, PSD-FL-143A and shall become an attachment to the permit.

Sincerely,

Carol M. Browner
Secretary

CMB/plm

c: W. Thomas, SW District
G. Meier, Farmland

P 256 396 245

RECEIPT FOR CERTIFIED MAIL

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

Sent to C.M. Garris	
Street and No. Garrland Ind.	
P.O., State and ZIP Code Bartow, FL	
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 3-14-91	

PSD-F-1-143A

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

SENDER: Complete items 1 and 2 when additional services are desired, and comple 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent from being returned to you. The return receipt fee will provide you the name of the person delivere the date of delivery. For additional fees the following services are available. Consult postmaster 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. Garris, Gen. Mgr.
Garrland Ind.
P.O. BOX 960
Bartow, FL 33803

4. Article Number
P 256 396 245

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X Linda Thompson

6. Signature — Agent
X

7. Date of Delivery
3/14/91

8. Addressee's Address *(ONLY if requested and fee paid)*
61

PS Form **3811**, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 123-90-02

February 14, 1991

Mr. C. H. Fancy
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Farmland Industries, Inc.
No. 5 Sulfuric Acid Plant
Request for Permit Amendment
Permit No. AC53-185490, PSD-FL-143A

Dear Mr. Fancy:

As discussed with Mr. John Reynolds of your staff on February 12, 1991, on behalf of Farmland Industries, Inc., two amendments to the above-referenced permit are hereby requested.

1. Specific Condition No. 5

To clarify the basis of the NOx emission limit, the following change is requested:

FROM: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

TO: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

The above NOx emission limits are based on a general emission factor. If a higher emission factor results from compliance testing, the NOx emission limits may be revised after FDER review.

2. Specific Condition No. 8

To allow NOx compliance testing using EPA Method 7E, the following change is requested:

FROM: 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.

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

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:PAR:wa

cc: Mr. Ed Ferking, Farmland
Mr. Gene Muir, Farmland
G Reynolds
B. Thomas, SWFWMD

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____

To: _____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

Interoffice Memorandum

TO: Carol M. Browner

FROM: Steve Smallwood

DATE: March 5, 1991

SUBJ: Amendment to Permit PSD-FL-143A
Farmland Industries, Inc.

Attached for your approval and signature is a letter modifying the above permit to show the basis for the NOx emission limits and to allow NOx testing by the instrument method.

The Division recommends approval of this amendment.

SS/plm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4APT-AEB

FEB 28 1991

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Farmland Industries, Inc. (PSD-FL-143A)

Dear Mr. Fancy:

This is to acknowledge receipt of your final determination and permit dated January 28, 1991, for a modification to Farmland Industries' previously issued Prevention of Significant Deterioration (PSD) permit.

We have reviewed this package as requested and have no adverse comments at this time. We concur with your determination of BACT for the sulfuric acid plant.

Thank you for the opportunity to review this package. If you have any questions or comments, please contact Mr. Gregg Worley of my staff at (404) 347-2904.

Sincerely yours,

Douglas Neeley for

Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: Mr. C.M. Farris
General Manager
Farmland Industries, Inc.
P.O. Box 960
Bartow, Florida 33830
J. Reynolds
B. Andrews
C. Halladay
B. Thomas, SW Dist.

From SWD

WORKING COPY

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 123-94-06

February 14, 1995

Mr. A. A. Linero
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Polk County-AP
Farmland Hydro, L.P.
Permit Amendment Requests

Dear Mr. Linero:

During recent discussions with FDEP staff, the subject of air permit conditions had come up. Based on those discussions, it is our understanding that all emission limitations in current permits must either be based on a standard, or reflect emission limits requested by a permittee to avoid a specific rule applicability (e.g. PSD, etc.). Any emission limit which is not supported by this criteria can be removed from the permit.

It is anticipated that the removal of such emission limitations from current operation permits and source construction permits will facilitate Title V permit application compilation by Farmland as well as the compilation of Title V permit conditions by FDEP. Thus, only valid applicable requirements will remain in the source permits.

Farmland has several air operation (and the preceding construction) permits which contain emission limitations outside of the above FDEP criteria. As a result, we are requesting FDEP to amend the permits tabulated below. A discussion on these permits is provided in the attachments. The attachment number corresponds to the item number in the table below.

In accordance with FDEP protocol, the request for permit amendment is being submitted to the office where the permit was issued. As the source operation permits were issued by FDEP's Tampa office, a request for amendment of those permits is simultaneously being submitted to that office. The amendment request for construction permits issued by the Bureau of Air Regulation (BAR) are being sent to your attention. The permit listing below, however, includes all the permits to be amended so that both the FDEP District and the BAR offices are aware of the scope of the permit amendments

It is requested that the following permits be amended:

Item	Unit/Operation	Operation Permit No.	Construction Permit No.
1.	North MAP/DAP Plant	A053-250142 (1)	AC53-210886 (2)
2.	Green SPA Plant	A053-242141 (1)	AC53-138041 (2)
3.	No. 5 SAP	A053-200485 (1)	AC53-185490 (2)
	Therminol Heater	A053-187834 (3)	None
	Auxiliary Steam Boiler	A053-159758 (3)	None

NOTES:

(1) Operation permit amendment expected from FDEP District office after the construction permit amendment is issued by BAR.
(2) Construction permit amendment expected from BAR.
(3) Operation permit amendment expected from FDEP District office.

A check in the amount of $750 (permit amendments processing fee) is enclosed.

Thank you for your kind assistance. If you have any questions, please call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par

c: C. Jenkins, Farmland Hydro, L.P.
G. Kissel, FDEP Tampa

ATTACHMENT 1

Unit/Operation : North MAP/DAP Plant

Permit No. : AC53-210886

Amendment Request :

The above referenced permit contains a 0.5% sulfur content limit for No. 2 fuel oil. This sulfur content reflects a typical analysis of No. 2 fuel oil available on the market. To our knowledge, the sulfur content limit in the permit is not based on a regulatory standard, nor does it reflect an emission limitation requested by Farmland to avoid a specific rule applicability (e.g. PSD, etc.).

Therefore, it is requested that the construction permit be amended as follows:

Page 8, Specific Condition No. 15:

FROM: The maximum heat input rate to the dryer shall not exceed 50 MMBtu/hour. Natural gas (max. 0.05 MMCF/hr) shall be burned in the dryer; except when the natural gas supply to the plant is curtailed, then No. 2 fuel oil with a maximum of 0.5% sulfur may be burned for upto 400 hours during any 12 month period.

TO: The maximum heat input rate to the dryer shall not exceed 50 MMBtu/hour. Natural gas (max. 0.05 MMCF/hr) shall be burned in the dryer; except when the natural gas supply to the plant is curtailed, then No. 2 fuel oil may be burned for upto 400 hours during any 12 month period.

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

PERMITTEE:
Farmland Hydro, L.P.
P. O. Box 960
Bartow, Florida 33830

Permit Number: AC 53-210886
PSD-FL-186
Expiration Date: January 1, 1994*
County: Polk
Latitude/Longitude: 27°50'37"N
81°56'05"W
Project: North GTSP/MAP/DAP
Granulation Plant Modifications

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 drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to modify the existing North GTSP/MAP/DAP** Granulation Plant to increase allowable production from 70 to 120 TPH MAP and from from 50 to 100 TPH DAP. The modifications include: installing a new reactor-granulator scrubber system followed by a new BFL scrubber system; a new cooler-chiller; a new venturi-cyclonic scrubber system; a new MAP pipe reactor and granulator; new screens and recycle conveyor; new smaller fans for the screens and mills; relocation of existing screens, elevators, elevator drive, and recycle conveyor in the screen system; new controls for the dryer scrubber and the screen/mill scrubber; relocation of the pipe reactor feed tank system; relocation and modification of the DAP reactor system; relocation of the north fines bin; relocation of the reclaim water tank system; removal of the existing GTSP scrubber systems; and other associated alterations. The plant will discharge air pollutants through the existing MAP/DAP main stack (114,000 acfm/88,000 dscfm/129 ft. elevation/7.5 ft. diameter/108°F) and the new reactor-granulator stack (49,700 acfm/27,000 dscfm/129 ft. elevation/5.5 ft. diameter/178°F). The North MAP/DAP Granulation Plant is located at Farmland Hydro, L.P.'s phosphate fertilizer chemical manufacturing facility on County Road 640 West, near Bartow, Polk County, Florida. The UTM coordinates of this facility are Zone 17, 409.5 km E and 3079.5 km N.

SPECIFIC CONDITIONS:

13. This plant shall not manufacture GTSP.

14. The plant may operate continuously, 8760 hrs/yr.

15. Heat input to the dryer shall not exceed 50 MMBtu/hr. Only natural gas (max. 0.05 MMCF/hr) shall be burned in the dryer; except when the natural gas supply to the plant is curtailed, then No. 2 fuel oil with a maximum of 0.5% sulfur may be burned for up to 400 hrs during any 12 month period.

16. Lignosulphonates (lignin) shall be used when needed to control unconfined dust emissions when handling MAP and DAP product. Defoamers may be added to the 28% P_2O_5 scrubbing liquid.

17. Reasonable precautions for minimizing fugitive emissions of ammonia shall include routine inspection of vessels, piping, and hoses; placing scrubbers in operation prior to feeding ammonia to the process; and prompt repair of any leaks.

Testing Requirements

18. This plant shall be tested at a production rate of 108 to 120 TPH MAP and 90 to 100 TPH DAP within 60 days of commercial production of these products by the modified plant and annually thereafter for particulate matter, fluorides, and visible emissions. It shall also be tested for ammonia on achieving commerical production and prior to the renewal of any permit to operate issued for the modified plant (test every 5 years). The annual test during MAP and DAP production will be waived if that product is not manufactured during that year. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700. The unit shall not operate above the maximum permitted MAP or DAP production rates; except during the time of the compliance tests.

19. Test methods to determine compliance are EPA Method 5 for particulate matter, EPA Method 9 for visible emissions, and EPA 13A or 13B for fluorides. These methods are described in 40 CFR 60, Appendix A (July 1, 1991). Ammonia emissions shall be determined using a variation of the EPA Draft Method, using large impingers with 100 mls of 1.0 normal sulfuric acid in the first three impingers, the last impinger dry and a probe with an external design similar to that used in EPA Method 16, or any other test method agreed to by the Department.

Administrative Requirements

20. The Department's Southwest District shall be notified in

ATTACHMENT 2

Unit/Operation : Green Super Phosphoric Acid Plant

Permit No. : AC53-138041

Amendment Request :

The most recent construction permit in our files was issued November 19, 1987. The permit contains nitrogen oxides (NOx) emission limits of 40.5 pounds per hour and 90.0 tons per year. NOx emissions are a by-product of the process. To our knowledge, the emission limitation in the permit is not based on a standard for GSPA, nor does it reflect an emission limitation requested by Farmland to avoid a specific rule applicability (e.g. PSD, etc.).

It is requested that the construction permit be amended as follows:

Page 6, Specific Condition No. 2:

FROM: The emissions from the Green Superphosphoric Acid plant shall not exceed:

Pollutant	Maximum Allowable Emissions	
	pounds/hour	tons/year
NOx	40.5	90.0
Fluoride	0.2	0.4

TO: Emissions of fluorides from the Green Superphosphoric Acid plant shall not exceed 0.2 pounds per hour, or 0.4 tons/year.

Page 6, Specific Condition No. 8:

FROM: Delete the portion of the condition which requires NOx testing.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

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

Permit Number: AC 53-138041
Expiration Date: October 31, 1988
County: Polk
Latitude/Longitude: 27° 50' 37" N
81° 56' 05" W
Project: Green Super Phosphoric Acid Oxidation Unit

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 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 a Green Superphosphoric Acid (GSPA) plant located at the permittee's phosphate fertilizer complex near Bartow on State Road 640 in Polk County, Florida. UTM coordinates are 409.5 km E and 3079.5 km N.

Construction shall be in accordance with the attached permit application except as otherwise noted under the Specific Conditions set forth in this permit.

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER form 17-1.202(1), and letter dated August 7, 1987.
2. Southwest District DER letter dated October 16, 1987.
3. Farmland letter dated October 29, 1987, with attached letter from Koogler & Associates dated October 27, 1987.

PERMITTEE:
Farmland, Inc.

Permit Number: AC 53-138041
Expiration Date: October 31, 1988

SPECIFIC CONDITIONS:

2. The emissions from the Green Superphosphoric Acid plant shall not exceed:

Pollutant	Maximum Allowable Emissions	
	lb/hr	T/yr
NOx	40.5	90.0
Fluoride	0.2	0.4

3. Other emissions from the process shall be controlled by sealing and/or venting such emissions to the pollution abatement system.

4. The permittee shall install, calibrate, maintain, operate and record data from flow monitoring devices used to determine total P_2O_5 input to the plant. A daily record on the P_2O_5 input to the plant shall be maintained.

5. The permittee shall measure and record the total pressure drop across the scrubber system. Pressure drop across the scrubber must be at least 4 inches of water during plant operation. These records shall be maintained for 2 years and available for inspection by regulatory agency personnel on request.

6. Construction should commence and be completed within a reasonable time based on the projections in the application.

7. Reasonable precautions to prevent fugitive particulate emissions during modification, such as coating or spraying roads and construction sites used by contractors, shall be taken by the permittee.

8. Before the construction permit expires, the GSPA plant shall be sampled for NOx and fluoride emissions. Test procedures shall be in accordance with EPA reference methods 1, 2, 3, 7 and 7A or 7E, 13A or 13B as published in 40 CFR 60, dated July 1, 1986. The Department shall be notified in writing 15 days or more prior to the compliance test. The test shall be conducted at permitted production capacity or no less than 90% thereof. P_2O_5 input, pH of scrubber water, and pressure drop across the scrubber shall be reported to the Department along with the test data and results.

Final Determination

Farmland Industries
Polk County

Green Super Phosphoric Acid Oxidation Unit
Permit No. AC 53-138041

Florida Department of Environmental Regulation
Central Air Permitting
Bureau of Air Quality Management

November 17, 1987

Final Determination

The Bureau of Air Quality Management completed its review of Farmland's application for a permit to construct a Green Super Phosphoric Acid Oxidation Unit at their Polk County phosphate facility. On October 17, 1987, public notice of the Department's intent to issue the permit was published in the Lakeland Ledger. Copies of the Technical Evaluation and Preliminary Determination were available for public inspection at the Department's offices in Tampa and Tallahassee.

Comments were submitted by the applicant and the Southwest District DER office. The issues and the Department's responses are as follows:

Issue No. 1: Farmland requested a modification to Specific Condition No. 5 reducing the design minimum scrubber pressure drop to 4 inches of water.

The Department is in agreement with this request and the permit will be modified accordingly. If necessary, the minimum pressure drop can be changed again after results are obtained from the compliance test.

Issue No. 2: Farmland requested changes in the test methods specified in Specific Condition No. 8.

These changes were made as requested. NOx test method 7E was not included initially because 40 CFR 60, App. A, Method 7E, paragraph 1.1 states that the method is applicable only to those sources for which it is specified in the NSPS regulations, and Method 7E was not specified for nitric acid plants. Since this source is a one-of-a-kind unit with net emissions below the significant level, the Department agrees that method 7E will be sufficient.

Issue No. 3: The DER Southwest District office requested that a Specific Condition be added to require a maximum 10% opacity limit since the emissions are similar to those from a nitric acid plant.

Farmland has confirmed from their pilot plant data that the opacity will be less than 20% but likely will be more than 10%. Since it is possible that the opacity may be closer to 10% than 20% once fine tuning is completed, the Department is in agreement that a reasonable opacity limitation can be established after the plant starts up and is lined out. Language to this effect was included as Specific Condition No. 10. Since additional time will be needed for this determination, the permit expiration date was changed to October 31, 1988.

ATTACHMENT 3

Unit/Operation : No. 5 Sulfuric Acid Plant

Permit No. : AC53-185490

Amendment Request :

The above referenced permit contains emission limitations for nitrogen oxides. To our knowledge, this limitation in the permit is not based on a standard, nor does it reflect an emission limitation requested by Farmland to avoid a specific rule applicability. In fact FDEP's PSD review in 1989 (PSD-FL-143) acknowledged that NOx is a by-product of the sulfuric acid manufacturing process and there is no method of control to represent Best Available Control Technology for it. It is interesting to note that the PSD review at that time was triggered based on conservative projections of potential emissions from the project. Subsequent testing of the project, as built, have shown that a PSD review for NOx would not have been required if representative plant performance information was available during preconstruction review.

Based on the above discussion it is requested that the construction permit be amended as follows:

Page 6, Specific Condition No. 5:

Delete this condition regarding NOx emissions.

Page 6, Specific Condition No. 8:

Delete the portion of the condition which requires NOx testing.

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

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

Permit Number: AC 53-185490
PSD-FL-143A
Expiration Date: Sept. 30, 1991
County: Polk
Latitude/Longitude: 27°50'37"N
81°56'05"W
Project: Sulfuric Acid Plant No. 5 - Production Increase to 2400 TPD

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 increase in production from 2000 TPD to 2400 TPD of sulfuric acid in plant No. 5. The source is 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 increase in production shall be carried out 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 received on August 23, 1990.

SPECIFIC CONDITIONS:

4. Sulfuric acid mist emissions shall not exceed:

0.15 lb/ton of 100% sulfuric acid produced
15.0 lbs/hr
65.7 tons/yr

5. Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 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

Technical Evaluation
and
Preliminary Determination

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

Sulfuric Acid Plant No. 5
Production Increase to 2,400 TPD

Permit No. AC 53-185490
PSD-FL-143A

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

November 15, 1990

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 SO_2 and acid mist 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 previous BACT determination for NOx (PSD-FL-143).

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	0.01	25.0	N/A
24-hr	(less than 0.01)	5.0	13.0
Annual	(less than 0)	1.0	N/A
Acid Mist (24-hr)	5.0	N/A	5.0*

*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).

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

	Air Pollutant (tons/yr) Sulfuric Acid Plants 1	2	5	GSPA	Net Increase	Signif. Increase
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
NOx						
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 NOx.

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:

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

RECEIVED
FEB 15 1991
DER-BAQM

KA 123-90-02

February 14, 1991

Mr. C. H. Fancy
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Farmland Industries, Inc.
No. 5 Sulfuric Acid Plant
Request for Permit Amendment
Permit No. AC53-185490, PSD-FL-143A

Dear Mr. Fancy:

As discussed with Mr. John Reynolds of your staff on February 12, 1991, on behalf of Farmland Industries, Inc., two amendments to the above-referenced permit are hereby requested.

1. Specific Condition No. 5

To clarify the basis of the NOx emission limit, the following change is requested:

FROM: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

TO: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

The above NOx emission limits are based on a general emission factor. If a higher emission factor results from compliance testing, the NOx emission limits may be revised after FDER review.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609

Mr. C.H. Fancy
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

2. Specific Condition No. 8

To allow NOx compliance testing using EPA Method 7E, the following change is requested:

FROM: 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.

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

If you have any questions, please do not hesitate to give me a call.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:PAR:wa

cc: Mr. Ed Ferking, Farmland
Mr. Gene Muir, Farmland
G. Reynolds
B. Thomas, SWD ist.

Florida Department of Environmental Regulation
Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

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

February 4, 1991

Enclosed is construction permit No. AC 53-185490, PSD-FL-143A, to increase the production rate of the No. 5 sulfuric acid plant at Farmland Industries, Inc. near Bartow, Polk County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

B. Thomas, SW District
J. Harper, EPA
J. Koogler, P.E.

P 407 853 146

RECEIPT FOR CERTIFIED MAIL

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

Sent to C. M Farris	
Street and No. Farmland Ind.	
P.O., State and ZIP Code Bartow, Fl	
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 2-4-91	

AC 53-185490
PSD-FL-143A

PS Form 3800, June 1985 *U.S.G.P.O. 1989-234-555

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, Gen. Mgr.
Farmland Industries
P.O. BOX 960
Bartow, Fl 33830

4. Article Number
P 407 853 146

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X Linda Thompson

6. Signature — Agent
X

7. Date of Delivery
2-7-91

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 2-4-91.

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.

Lisa Baker — Clerk

2-4-91 — Date

Final Determination

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

Sulfuric Acid Plant No. 5
Production Increase to 2,400 TPD

Permit No. AC 53-185490
PSD-FL-143A

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

January 25, 1990

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to increase the production rate of the No. 5 sulfuric acid plant at Farmland Industries, Inc. near Bartow, Polk County, Florida, was distributed on November 15, 1990. The Notice of Intent to Issue was published in The Ledger on November 29, 1990. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Tampa offices.

Comments were submitted by Koogler & Associates on the Department's Intent to Issue the permit. The comments included two requests: (1) modify Specific Condition No. 5 to state that nitrogen oxide emissions "are not expected to exceed ---" instead of "shall not exceed ---" and (2) delete the annual test requirement for nitrogen oxides. In response to (1), the Department used the same language in the proposed permit (for increased production) as was used without objection in the original permit for construction (AC 53-185490, PSD-FL-143). If the general NOx emission factor used in both permits is found to be improper, the Department will consider amending both permits accordingly. In response to (2), the annual NOx test data will assist both the permittee and the Department in ascertaining the proper NOx emission factor to use if such amendments are required. Therefore, the final action of the Department will be to issue construction permit AC 53-185490, PSD-FL-143A as proposed in the Technical Evaluation and Preliminary Determination.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

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

Permit Number: AC 53-185490
PSD-FL-143A
Expiration Date: Sept. 30, 1991
County: Polk
Latitude/Longitude: 27°50'37"N
81°56'05"W
Project: Sulfuric Acid Plant No. 5 - Production Increase to 2400 TPD

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 increase in production from 2000 TPD to 2400 TPD of sulfuric acid in plant No. 5. The source is 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 increase in production shall be carried out 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 received on August 23, 1990.
2. Koogler & Associates' letter dated November 30, 1990.
3. EPA's letter dated December 5, 1990.

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.

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.

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 prescribed 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.

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 2400 tons per day based on 100% H_2SO_4.

3. Sulfur dioxide emissions shall not exceed:

4 lbs/ton of 100% sulfuric acid produced
400 lbs/hr
1752 tons/yr

SPECIFIC CONDITIONS:

4. Sulfuric acid mist emissions shall not exceed:

0.15 lb/ton of 100% sulfuric acid produced
15.0 lbs/hr
65.7 tons/yr

5. Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 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

SPECIFIC CONDITIONS:

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).

Issued this 1 day
of February, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner

Carol M. Browner, Secretary

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

The applicant proposes to increase sulfuric acid production from 2,000 tons per day to 2,400 tons per day at their existing No. 5 sulfuric acid plant in Polk County.

The proposed project will result in a significant increase in emissions of SO_2 and acid mist. 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:

August 23, 1990

BACT Determination Requested by the Applicant:

The BACT determination requested by the applicant is presented below:

Control Technology	Double Absorption/Fiber Mist Eliminators

Pollutant	Emission Limits
SO_2	4 lb/ton of 100% H_2SO_4 produced
Acid Mist	0.15 lb/ton of 100% H_2SO_4 produced
Visible Emissions	10% opacity
NOx	0.12 lb/ton

Basis of Review:

This determination was based upon input 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:

Control Technology	Double Absorption/Fiber Mist Eliminators
Pollutant	Emission Limits
SO_2	4.0 lb/ton of 100% H_2SO_4 produced
Visible Emissions	10% opacity
Acid Mist	0.15 lb/ton of 100% H_2SO_4 produced
NOx	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 SO_2 and acid mist. The emission limits reflect conversion efficiency of around 99.7% of SO_2 to H_2SO_4. 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 BACT determination for nitrogen oxides is not required for this production increase. However, the same nitrogen oxides limits will apply as determined in the prior BACT determination for the construction of the No. 5 sulfuric acid plant.

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 SO_2 emissions:

Averaging Time	Predicted Impact (ug/m^3)	Deminimus (ug/m^3)	Fla. AAQS (ug/m^3)
SO2			
Annual	(less than 0)	N/A	60
24-hr	(less than 0.01)	13.0	260
3-hr	0.01	N/A	1300

Conclusion

The incremental impact from SO_2 due to the proposed modification is insignificant. The impacts associated with the proposed increase in production support 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.
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

January 25, 1991
Date

Approved by:

Carol M. Browner, Secretary
Dept. of Environmental Regulation

2/1/ 1991
Date

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To:	Location:
To:	Location:
To:	Location:
From:	Date:

Interoffice Memorandum

TO: Carol M. Browner

FROM: Steve Smallwood

DATE: January 25, 1991

SUBJ: Approval of Construction Permit AC 53-185490, PSD-FL-143A
Farmland Industries, Inc.

Attached for your approval and signature is a permit and accompanying Best Available Control Technology (BACT) determination prepared by the Bureau of Air Regulation for the above mentioned company. The permit will allow an increase in the production rate of the No. 5 sulfuric acid plant at Farmland Industries, Inc. near Bartow, Polk County, Florida.

Comments were received during the public notice period and addressed in the Final Determination. I recommend your approval and signature.

SS/JR/plm

Attachments

signed

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4APT-AEB

DEC 05 1990

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Farmland Industries, Inc. (PSD-FL-143A)

Dear Mr. Fancy:

This is to acknowledge receipt of an application dated August 20, 1990, for a modification to Farmland Industries' previously issued Prevention of Significant Deterioration (PSD) permit.

We have reviewed the application as requested and have no substantive comments at this time.

Thank you for the opportunity to review this package. If you have any questions or comments, please contact Mr. Gregg Worley of my staff at (404) 347-2904.

Sincerely yours,

Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: J. Reynolds
B. Thomas, SW Dist.
CHF/BA

AFFIDAVIT OF PUBLICATION

THE LEDGER
Lakeland, Polk County, Florida

Case No.....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Stephen DeWitt, who on oath says that he is Controller of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a .....

Notice of Intent

.....

in the matter of .....

5 Plant

.....

in the .....

.....

Court, was published in said newspaper in the issues of .....
November 29;

.....

1990

.....

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed ..... Controller

Sworn to and subscribed before me this 29th day of November A.D. 19 1990

(Seal) ..... Notary Public

Notary Public, State of Florida
My Commission Expires: My Commission Expires Nov. 11, 1994
Bonded Thru Troy Fain - Insurance Inc.

My Commission Expires
account # 10643
Farmland Ind

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., State Road 640 West, Bartow, Florida, to increase production rate of the No. 5 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 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. 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. Barry Andrews 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.
R-720 — 11-29; 1990

R 720

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 123-90-02

November 30, 1990

Mr. C. H. Fancy
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Farmland Industries, Inc.
Polk County, Florida
FDER File AC53-185490
PSD-FL-143A

Dear Mr. Fancy:

On behalf of Farmland Industries, Inc. (Farmland), I have reviewed the draft of permit AC53-185490 included in the Technical Evaluation and Preliminary Determination for the production rate increase for the No. 5 sulfuric acid plant proposed by Farmland. I have comments related to the nitrogen oxides emission limit and the monitoring requirement for nitrogen oxides.

The nitrogen oxides emission limit of 11.9 pounds per hour is based on information that was provided in the permit application submitted by Farmland. This emission limit was based on a "emission factor" of 2.1 x 10^{-6} pounds of NOx per dry standard cubic foot of sulfuric acid plant stack gas and on a stack gas flow rate of 56,739 dry standard cubic feet of stack gas per ton of 100% acid produced. The NOx emission factor was developed by Koogler & Associates personnel in about 1976 from a one-time measurement using EPA Method 7. The measurement was made on a typical sulfuric acid plant in Polk County operating at a rate of approximately 2250 tons per day. The emission factor has been used quite extensively but, as I point out, it has been based on a very limit data base. Since the time we developed this emission factor, I have had the opportunity to review nitrogen oxides emission data developed by Monsanto showing a higher NOx concentration in sulfuric acid plant stack gas and measurements made by another phosphate fertilizer company in west central Florida indicating lower NOx concentrations in the stack gas.

The three sets of measurements that I have referenced all indicate that the emission factor of 2.1 x 10^{-6} pounds of NOx per cubic foot of stack gas (18 ppm NOx, by volume) is a reasonable emission factor. The data, however, demonstrate that there can be quite a bit of variability in this

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609

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P.B. METER
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Mr. C. H. Fancy
FDER
2600 Blair Stone Road
Tallahassee, FL 32399-2400

factor. My concern is that a "general" emission factor has been used to establish a "specific" emission limiting standard. I express this concern as specific emission limiting standards based on general emission factors have caused considerable problems for several companies in the past. These problems have resulted in a review of matters by the Department and time consuming negotiations between the permit holder and the Department to establish more reasonable emission limits for particular installations.

I recognize this as a complex problem as emission factors are commonly used during the preparation of permit applications for estimating emissions from facilities when actual emission data do not exist and, as the estimates are used for permitting, they must be binding on the applicant. On the other hand, it is not reasonable to limit the permittee to emissions based on a general emission factor with no leeway. I would suggest that Specific Condition No. 5 of the subject draft permit state that nitrogen oxides emissions are not expected to exceed 11.9 pounds per hour. The condition could continue with wording that would require Farmland to provide justification to the Department if this emission limit is exceeded. Once a compliance test is conducted at the plant, the NOx standard in the construction permit could be amended if necessary and the revised standard could then carry over to subsequent operating permits.

The other matter that I would like to address is the requirement for initial and annual compliance testing for nitrogen oxides emissions using EPA Method 7. As nitrogen oxides emissions from sulfuric acid plants are quite low, I would like to suggest that testing for nitrogen oxides emissions be required only as a condition of the construction permit (the initial test) and then be required only once every five years on the renewal date of the operating permit.

I appreciate your consideration of these matters and will be more than happy to provide additional information or to discuss the matters further with you. Please do not hesitate to contact me if you have questions regarding these matters.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:wa

cc: Mr. Ed Ferking, Farmland
J. Reynolds
C. Holladay
B. Thomas, SW Dist
CHF/BA

KOOGLER & ASSOCIATES

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

November 15, 1990

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 increase the production rate of the No. 5 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. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

James K. Pennington
for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/JR/plm

Attachments

c: B. Thomas, SW District
J. Harper, EPA
J. Koogler, P.E.

P 256 396 136

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. C. M. Farris, Farmland Inc	
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: 11-16-90 Permit: AC 53-185490 PSD-FL-154A	

PS Form 3800, June 1985

U.S.G.P.O. 1989-234-555

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 256 396 136

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X Linda Thompson

6. Signature — Agent
X

7. Date of Delivery
11/19/90

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 ★U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

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 53-185490
PSD-FL-143A

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 August 23, 1990, to the Department of Environmental Regulation for a permit to increase production rate of the No. 5 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

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

Copies furnished to:

B. Thomas, SW District
J. Harper, EPA
J. Koogler, P.E.

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 11-16-90.

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.

Kyra Dokar
Clerk

11-16-90
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., State Road 640 West, Bartow, Florida, to increase production rate of the No. 5 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 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. 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.

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(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.

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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. Barry Andrews 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
Production Increase to 2,400 TPD

Permit No. AC 53-185490
PSD-FL-143A

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

November 15, 1990

I. Application

A. Applicant

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

B. Request

The Department received an application on August 23, 1990, for a permit to increase the production rate of the No. 5 sulfuric acid plant at the applicant's phosphate complex near Bartow, Florida. After receiving additional information on August 29, the application was deemed complete.

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 increase the production rate of the applicant's 2000 TPD sulfuric acid plant (No. 5) to 2400 TPD. The proposed project will increase the total sulfuric acid capacity at this facility from 5200 TPD to 5600 TPD as shown below:

Plant	Yr Constructed	Type	Capacity
3	1972/82	Double Absorption	1600 TPD
4	1972/82	Double Absorption	1600 TPD
5	1990	Double Absorption/ Cogeneration	2400 TPD

Annual emission changes resulting from the increased production rate are summarized in the following table.

No. 5 Sulfuric Acid Plant
Emissions (tons/yr)

Pollutant	Present	Proposed	Net Increase	Significant Increase
SO_2	1460.0	1752.0	292.0	40.0
Acid Mist	54.8	65.7	10.9	7.0
NOx	43.4	52.2	8.8	40.0

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 SO_2 and acid mist 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 previous BACT determination for NOx (PSD-FL-143).

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	0.01	25.0	N/A
24-hr	(less than 0.01)	5.0	13.0
Annual	(less than 0)	1.0	N/A
Acid Mist (24-hr)	5.0	N/A	5.0*

*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 are below the de minimus impact levels. Modeling appears to have been carried out in accordance with EPA guidelines.

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 5.0 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 5.0 micrograms per cubic meter at a distance of 1.0 kilometer from the plants.

Nitrogen oxides modeling is not required since the increase in NOx emissions due to the higher production is below the de minimus level of 40 tons per year.

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 emissions are not expected to 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 increase in production of the No. 5 sulfuric acid plant, 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.

143A

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

The applicant proposes to increase sulfuric acid production from 2,000 tons per day to 2,400 tons per day at their existing No. 5 sulfuric acid plant in Polk County.

The proposed project will result in a significant increase in emissions of SO_2 and acid mist. 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:

August 23, 1990

BACT Determination Requested by the Applicant:

The BACT determination requested by the applicant is presented below:

Control Technology	Double Absorption/Fiber Mist Eliminators
Pollutant	Emission Limits
SO_2	4 lb/ton of 100% H_2SO_4 produced
Acid Mist	0.15 lb/ton of 100% H_2SO_4 produced
Visible Emissions	10% opacity
NOx	0.12 lb/ton

Basis of Review:

This determination was based upon input 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:

Control Technology	Double Absorption/Fiber Mist Eliminators
Pollutant	Emission Limits
SO_2	4.0 lb/ton of 100% H_2SO_4 produced
Visible Emissions	10% opacity
Acid Mist	0.15 lb/ton of 100% H_2SO_4 produced
NOx	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 SO_2 and acid mist. The emission limits reflect conversion efficiency of around 99.7% of SO_2 to H_2SO_4. 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 BACT determination for nitrogen oxides is not required for this production increase. However, the same nitrogen oxides limits will apply as determined in the prior BACT determination for the construction of the No. 5 sulfuric acid plant.

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 SO_2 emissions:

Averaging Time	Predicted Impact (ug/m^3)	Deminimus (ug/m^3)	Fla. AAQS (ug/m^3)
SO2			
Annual	(less than 0)	N/A	60
24-hr	(less than 0.01)	13.0	260
3-hr	0.01	N/A	1300

Conclusion

The incremental impact from SO_2 due to the proposed modification is insignificant. The impacts associated with the proposed increase in production support 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.
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

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

_____, 1990
Date

Approved by:

Dale Twachtmann, Secretary
Dept. of Environmental Regulation

_____ 1990
Date

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

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

Permit Number: AC 53-185490
PSD-FL-143A
Expiration Date: Sept. 30, 1991
County: Polk
Latitude/Longitude: 27°50'37"N
81°56'05"W
Project: Sulfuric Acid Plant No. 5 - Production Increase to 2400 TPD

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 increase in production from 2000 TPD to 2400 TPD of sulfuric acid in plant No. 5. The source is 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 increase in production shall be carried out 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 received on August 23, 1990.

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.

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.

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 prescribed 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.

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 2400 tons per day based on 100% H_2SO_4.

3. Sulfur dioxide emissions shall not exceed:

4 lbs/ton of 100% sulfuric acid produced
400 lbs/hr
1752 tons/yr

SPECIFIC CONDITIONS:

4. Sulfuric acid mist emissions shall not exceed:

0.15 lb/ton of 100% sulfuric acid produced
15.0 lbs/hr
65.7 tons/yr

5. Nitrogen oxides emissions shall not exceed:

0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 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

SPECIFIC CONDITIONS:

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).

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

OCT 19 1990

4APT-AEB

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Farmland Industries, Inc. (PSD-FL-143A)

Dear Mr. Fancy:

This is to acknowledge receipt of an application dated August 20, 1990, for a modification to Farmland Industries' previously issued Prevention of Significant Deterioration (PSD) permit.

We have reviewed the application as requested and have no substantive comments at this time.

Thank you for the opportunity to review this package. If you have any questions or comments, please contact Mr. Gregg Worley of my Staff at (404) 347-2904.

Sincerely yours,

Sally S. Turner, for
Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: [illegible]

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

AIR-4

U.S. OFFICIAL MAIL
PENALTY FOR PRIVATE USE $300
U.S. POSTAGE
$0.25

Mr. Clair Fancy, P.E., Chief
~~Bureau of Air~~ Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

October 2, 1990

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA - Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Ms. Harper:

Re: Completeness Review

The enclosed information is being forwarded to you for completeness review.

1. Vero Beach Municipal Power Plant: 58 MW combined cycle plant; PSD-FL-152; please submit comments by October 29, 1990;

2. Farmland Industries, Inc. - Green Bay Complex: Sulfuric Acid Plant No. 5 modification; PSD-FL-143A; please submit comments as soon as possible;

3. CF Industries - "C" and "D" Double Absorption Sulfuric Acid Plants modifications; PSD-FL-155; please submit comments by October 25, 1990; and,

4. Anheuser-Busch Companies, Inc. - lid production capacity modification; PSD-FL-153; currently incomplete and their response will be forwarded upon receipt; please review for comments.

5. Ft. Pierce Utilities Authority - H.D. King Unit 9: modification; PSD-FL-154; currently incomplete and their response will be forwarded to you upon receipt; please review for comments.

If there are any questions, please call Barry Andrews at (904) 488-1344 or write to me at the above address. All comments, written or oral, should be received by the above requested dates. If it is convenient to FAX a response to us, the FAX number to use is (904)922-6979.

Sincerely,

Barry D. Andrews

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

CHF/BM/t

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 123-90-02

August 29, 1990

Ms. Patty Adams
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Per your conversation yesterday with Pradeep, enclosed are two additional copies of the construction application for Farmland Industries, Inc.

Sincerely,

KOOGLER & ASSOCIATES

Wendy Auerbach

Wendy Auerbach

Enc.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

KA 123-90-02

August 20, 1990

Mr. Clair Fancy
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Application for Construction Permit
No. 5 Sulfuric Acid Plant
Farmland Industries, Inc.
Bartow, Florida

Dear Mr. Fancy:

Enclosed are four copies of the construction application for Farmland Industries, Inc. By this application, Farmland is requesting to increase the production rate of their No. 5 plant from 2,000 to 2,400 short tons per day of sulfuric acid. It has been determined that the application will require a full PSD review. A check for $5,000 (the application fee) is also enclosed.

If you have any questions or comments concerning the enclosed application, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler

John B. Koogler, Ph.D., P.E.

JBK:wa
Enc.

cc: Mr. Edward Ferking, Farmland

CHECK NO. 69964710

FARMLAND INDUSTRIES, INC.
GREEN BAY PLANT
P.O. Box 960
Bartow, Florida 33830

80-95
1012

CHECK AMOUNT
*******5,000.00

PAY EXACTLY *******5,000 DOLLARS AND 00 CENTS

VOID AFTER 180 DAYS

16 69 F0346 8-17-90
CO. BR. VEND. NO. CHECK DATE

ITED MISSOURI BANK OF
CARTHAGE, MO.

FARMLAND INDUSTRIES, INC.

A. J. Simpson

C. D. Mees

PAY
TO THE
ORDER
OF

Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, FL 32399

[redacted]

[illegible] Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Application for Construction Permit
No. 5 Sulfuric Acid Plant
Farmland Industries, Inc.
Bartow, Florida

Dear Mr. Fancy:

Enclosed are four copies of the construction application for Farmland Industries, Inc. By this application, Farmland is requesting to increase the production rate of their No. 5 plant from 2,000 to 2,400 short tons per day of sulfuric acid. It has been determined that the application will require a full PSD review. A check for $5,000 (the application fee) is also enclosed.

If you have any questions or comments concerning the enclosed application, please do not hesitate to contact me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler

John B. Koogler, Ph.D., P.E.

JBK:wa
Enc.

cc: Mr. Edward Ferking, Farmland

BEST AVAILABLE COPY

$5000 pd.
8-23-90
Recpt. #15114

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

AUG 23 1990

DER-BAQM

AC53-185490
PSD-FL-143A

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Double Absorption Sulfuric Acid Plant [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Farmland Industries, Inc. - Green Bay Complex COUNTY: Polk

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Sulfuric Acid Plant No. 5

SOURCE LOCATION: Street State Road 640 West City Bartow

UTM: East 17-409.5 km North 3079.5 km

Latitude 27 ° 50 ' 37 "N Longitude 81 ° 56 ' 05 "W

APPLICANT NAME AND TITLE: C. M. Farris, General Manager, Phosphate Fertilizer Manufacture

APPLICANT ADDRESS: P.O. Box 960, Bartow, Florida 33830

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Farmland Industries, Inc.

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable, and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: C M Farris

C. M. Farris, General Manager
Name and Title (Please Type)

Date: 8/16/90 Telephone No. (813) 533-1141

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been ~~designed~~/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

John B. Koogler, Ph.D., P.E.
Name (Please Type)

Koogler & Associates, Environmental Services
Company Name (Please Type)

4014 N.W. 13th Street, Gainesville, Florida 32609
Mailing Address (Please Type)

Florida Registration No. 12925 Date: 8/20/90 Telephone No. (904) 377-5822

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See Section 1.3 of attached report. All plants will operate in full compliance with applicable regulations.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction September 1990 Completion of Construction September 1990

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Absorbing towers for SO2 emissions are considered part of the production process rather than pollution control devices. Acid mist is controlled by Monsanto Enviro-Chem high efficiency mist eliminators which cost $93,951 including material, labor and engineering costs.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

See page 2a.

EXISTING PERMITS FOR
FARMLAND INDUSTRIES, INC.
SULFURIC ACID PLANTS

Sulfuric Acid Plant	Permit No.	Issue Date	Expiration Date
No. 1*	A053-99016	3/08/85	9/30/90
No. 2**	A053-99018	3/08/85	Terminated
No. 3	A053-138909	10/16/87	10/12/92
No. 4	A053-138910	10/16/87	10/12/92
No. 5	AC53-171751	1/30/90	9/30/91
No. 5	PSD-FL-143	1/30/90	9/30/91

* Sulfuric Acid Plant No. 1 will be permanently shutdown when Plant No. 5 is operational.

** Sulfuric Acid Plant No. 2 was permanently shutdown on March 29, 1985.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr ____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? NO

   a. If yes, has "offset" been applied? NA

   b. If yes, has "Lowest Achievable Emission Rate" been applied? NA

   c. If yes, list non-attainment pollutants. NA

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. YES(1)

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. YES(1)

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? YES(1)

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? NO

   a. If yes, for what pollutants? NA

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

(1) Additional information is supplied in the attached report.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Sulfur	Ash	0.005	65,592	Burner of Figure 3-1 (See attached report)

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 65,592 as sulfur

2. Product Weight (lbs/hr): 203,046 as 98.5% H_2SO_4

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
SO_2	400	1752	17-2.600(2)(b)	400	3000	13140	*
NOx	11.9	52.2	17-2.630	11.9	11.9	52.2	*
Acid Mist	15.0	65.7	17-2.600(2)(b)	15.0	150.0	657.0	*
VE	10%	-	"	10%	-	-	*

[1] *Stack of Figure 3-1 (See attached report). See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard.

[4] Emission, if source operated without control (See Section V, Item 3).
Potential SO2 emissions are based on a 97.7 % absorption efficiency for single absorption plant and acid mist emissions are based on a 90 % overall mist eliminator efficiency.

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Dual Absorption Towers	SO_2	99.7%	NA	Design & Test
High Efficiency Mist Eliminators	Acid Mist	95-98%	1 - 3 microns	Design & Test
	Acid Mist	85-95%	0.75 - 1 microns	Desing & Test
	Acid Mist	70-85%	0.5 - 0.75 microns	Desing & Test

E. Fuels NOT APPLICABLE

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur:_____ Percent Ash:_____

Density: _____ lbs/gal Typical Percent Nitrogen:_____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution):_____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NA Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

None

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 150 ft. Stack Diameter: 8 ft.

Gas Flow Rate: 114,623 ACFM 94;564 @ 68°F DSCFM Gas Exit Temperature: 180 °F.

Water Vapor Content: 0 % Velocity: 38.0 FPS

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr)_____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr._____

Manufacturer_____

Date Constructed _____ Model No. _____

	Volume (ft)^3	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ACFM _____ DSCFM* Velocity: _____FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify)_____

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

_____

_____

_____

_____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   (SEE SECTION III B)
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
   (SEE ATTACHED REPORT)
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   (SEE ATTACHED REPORT)
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.) (SEE ATTACHED REPORT)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency). (SEE SECTION III D AND ATTACHED REPORT)
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. (SEE FIGURE 3-1 IN ATTACHED REPORT)
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
   (SEE FIGURES 2-1 AND 2-2 IN ATTACHED REPORT)
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
   (SEE FIGURES 3-1 AND 3-2 IN ATTACHED REPORT)

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

SEE ATTACHED REPORT

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

SEE ATTACHED REPORT

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

. Attach all other information supportive to the PSD review.

. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

REPORT IN SUPPORT OF AN APPLICATION FOR A PSD CONSTRUCTION PERMIT REVIEW

PREPARED FOR:

FARMLAND INDUSTRIES, INC.
POLK COUNTY
BARTOW, FLORIDA

AUGUST 15, 1990

PREPARED BY:

KOOGLER & ASSOCIATES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(904) 377-5822

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

LIST OF TABLES

1.0 SYNOPSIS OF APPLICATION

1.1 Applicant

Farmland Industries, Inc.
Green Bay Complex
State Road 640 West
P.O. Box 960
Bartow, Florida 33830

1.2 Facility Location

Farmland Industries, Inc., Green Bay Complex, operates a phosphate chemical fertilizer manufacturing facility approximately six miles southwest of Bartow, Florida, on State Road 640 in Polk County. The complex occupies approximately 2400 acres and the UTM coordinates are Zone 17, 409.5 km east and 3079.5 km north.

1.3 Project Description

On October 20, 1989, Farmland Industries, Inc. submitted an application to construct a Monsanto Enviro-Chem double absorption sulfuric acid plant and a cogeneration facility which would use export steam from the new sulfuric acid plant to generate electrical power. According to the permit application, the new sulfuric acid plant (Plant No. 5) was to have a rated capacity of 2000 short tons per day of 100 percent H_2SO_4. Farmland Industries, Inc. found that the plant, as constructed, will have greater capacity and is proposing to increase the production of this plant to 2400 short tons per day of 100 percent H_2SO_4. Plant No. 5 is not yet in operation but is expected to be on-line in September 1990. The

cogeneration facility associated with the plant will remain rated at 38 megawatts of electrical power.

Farmland has four existing sulfuric acid plants on-site. Plants No. 1 and No. 2 are single absorption plants with ammonia scrubbers. Each has a rated capacity of 800 short tons per day of 100 percent H_2SO_4. Plant No. 2 was permanently shutdown on March 29, 1985. Plant No. 1 will be permanently shutdown when Plant No. 5 is operational. Plants No. 3 and No. 4 are double absorption plants each having a rated capacity of 1600 short tons per day of 100 percent H_2SO_4. Both plants will continue to operate when Plant No. 5 is operational. The proposed changes will result in a total increase of sulfuric acid capacity from 4800 tons per day to 5600 tons per day.

The proposed rate increase in the No. 5 sulfuric acid plant will result in a significant increase in sulfur dioxide and sulfuric acid mist emissions over emission rates permitted by AC53-171751.

A green superphosphoric acid (GSPA) plant permitted in November 1987 was addressed in the October 1989 application as nitrogen oxides emissions from the plant represented an emission increase that was contemporaneous with nitrogen oxides emission increases and decreases associated with the sulfuric acid plants. The net annual emission increase of nitrogen oxides, as presented in the 1989 permitting, was significant and was addressed in that application. The nitrogen oxides emission rate increase associated with the presently proposed increase in production rate of the No. 5 sulfuric acid plant is less than the de minimis increase defined in

17-2.500, Table 500-2,FAC.

Farmland is submitting the material herein to support an application to the Florida Department of Environmental Regulation for increasing the production rate of the No. 5 sulfuric acid plant. This report includes a description of the existing facility, a description of the No. 5 sulfuric acid plant, a review of Best Available Control Technology, an air quality review and an evaluation of the impact of the proposed modifications on soils, vegetation and visibility.

2.0 DESCRIPTION OF EXISTING FACILITY

Farmland Industries, Inc. Green Bay Complex operates a phosphate chemical fertilizer manufacturing facility approximately six miles southwest of Bartow, Florida, on State Road 640 in Polk County (See Figures 2-1 and 2-2). The complex occupies approximately 2400 acres and is located in UTM Zone 17 at coordinates 409.5 km east and 3079.5 km north.

The existing fertilizer complex consists of four sulfuric acid plants, two phosphoric acid plants, two ammonium phosphate plants producing monoammonium and diammonium phosphates (MAP and DAP), one superphosphoric acid plant, one green superphosphoric acid plant, auxiliary steam boilers and storage and shipping facilities for phosphate rock and the fertilizer products. A new sulfuric acid plant (Plant No. 5 - the fifth sulfuric acid plant at the chemical complex) is presently nearing completion of construction. Figure 2-3 shows the location of the existing plants and the new No. 5 sulfuric acid plant. The rate increase proposed for the No. 5 sulfuric acid plant will result in a net increase in sulfuric acid production. This production rate increase will be used to replace current sulfuric acid purchases and will not affect the operation of the other plants. The Farmland complex has an overall production capacity of approximately 600,000 tons per year of P_2O_5.

2.1 Sulfuric Acid Plants

There are four existing sulfuric acid plants at the Farmland Green Bay complex and a new sulfuric acid plant (Plant No. 5) nearing completion of

construction. Plants No. 1 and No. 2 were permitted in 1965 and are rated at 800 tons per day of 100 percent H_2SO_4 each. The plants are single absorption with emissions controlled by ammonia scrubbers. The sulfur dioxide and sulfuric acid mist emission limits for these plants are established by Rule 17-2.600(2)(a)2, FAC. The emission limits are:

Sulfur Dioxide	10 pounds per ton of 100 percent acid
Acid Mist	0.3 pounds per ton of 100 percent acid
Visible Emissions	10 percent opacity

Plant No. 2 was permanently shutdown on March 29, 1985. Plant No. 1 will be shutdown after the No. 5 sulfuric acid plant is operational.

Plants No. 3 and No. 4 were permitted in 1972 and expanded in 1982. These plants are rated at 1600 tons per day of 100 percent H_2SO_4 each and are both double absorption plants with the acid mist controlled by high efficiency mist eliminators. These plants are subject to Federal New Source Performance Standards as set forth in 40 CFR 60, Subpart H. The emission limiting standards for these plants are:

Sulfur Dioxide	4 pounds per ton of 100 percent acid
Acid Mist	0.15 pounds per ton of 100 percent acid
Visible Emissions	10 percent opacity.

The State of Florida has identical emission limiting standards for new sulfuric acid plants as set forth in Rule 17-2.600(2)(b), FAC. The

proposed changes will not affect the operations of the No. 3 and No. 4 sulfuric acid plants. These plants will continue to operate at their current rated capacities.

The No. 5 sulfuric acid plant is presently nearing completion of construction. The plant was permitted under AC53-171751 and PSD-FL-143 on January 30, 1990, at a production rate of 2000 tons per day of 100 percent sulfuric acid. The plant is a double absorption plant subject to the same emission limiting standards as the No. 3 and 4 plants. As constructed, plant No. 5 will have a production capacity of 2400 tons per day of 100 percent sulfuric acid and Farmland Industries, Inc. would like to use this full capacity. As the plant has not yet operated, the actual emissions from the plant have been presumed to be the same as emissions permitted in January 1990.

The actual emission rates of sulfur dioxide and acid mist from Plants No. 1 and No. 2 were determined from a review of emission measurements and production data from the past five years and were documented in the application for permit AC53-171751. The maximum measured sulfur dioxide emission rate was 6.50 pounds per ton of 100 percent H_2SO_4 produced and the maximum measured acid mist emission rate was 0.07 pounds per ton of 100 percent H_2SO_4 produced. The maximum annual acid production from the two plants (used to calculate annual emissions) was 430,516 tons per year (see application for AC53-171751 for documentation of these data).

Nitrogen oxide emissions from the sulfuric acid plants were estimated from an emission factor of 2.1×10^{-6} pounds of nitrogen oxides per cubic foot

of stack gas discharged from a sulfuric acid plant and typical stack gas flow rates for each of the plants.

2.2 Phosphoric Acid Plants

Farmland operates two phosphoric acid plants. One plant is an isothermal reactor design which is permitted at a maximum rate of 1850 tons per day of P_2O_5. The other plant is a Prayon phosphoric acid plant design and consists of two trains. The two trains produce approximately 1056 tons per day of P_2O_5. The production rate of these plants will not be affected by the production rate increase requested for the sulfuric acid plants.

2.3 Ammonium Phosphate Plants

Farmland operates two granular fertilizer plants. The diammonium phosphate plant (DAP) is permitted to operate at 82 tons per hour and produces approximately 600,000 tons per year of DAP with a nominal NPK grade of 18-46-0. The monoammonium phosphate (MAP) plant is permitted to operate at 60 tons per hour and produces approximately 400,000 tons per year of MAP with a nominal NPK grade of 11-52-0. The MAP plant is also permitted to produce granular triple superphosphate (GTSP) and DAP at rates of 33.2 tons per hour and 50 tons per hour, respectively. The change in sulfuric acid production will not affect these plants.

2.4 Superphosphoric Acid Plants

Approximately 100,000 tons per year of P_2O_5 (as 52 percent phosphoric acid) are evaporated to a concentration of 68 percent P_2O_5 in Farmland's superphosphoric acid (SPA) plant. SPA at a maximum rate of 27 tons per hour is further processed at Farmland's new green superphosphoric acid plant (GSPA). The production rate of these plants will not be affected by the proposed increase in sulfuric acid production.

2.5 Other Operations

The Farmland Green Bay complex also includes and auxiliary boiler to provide steam when there is an insufficient amount of export steam available from the sulfuric acid plants. There is also a 38 megawatt cogeneration facility associated with the No. 5 sulfuric acid plant and there are storage and shipping facilities for phosphate rock and fertilizer products. None of these operations will be affected by the production rate increase requested for the No. 5 sulfuric acid plant.

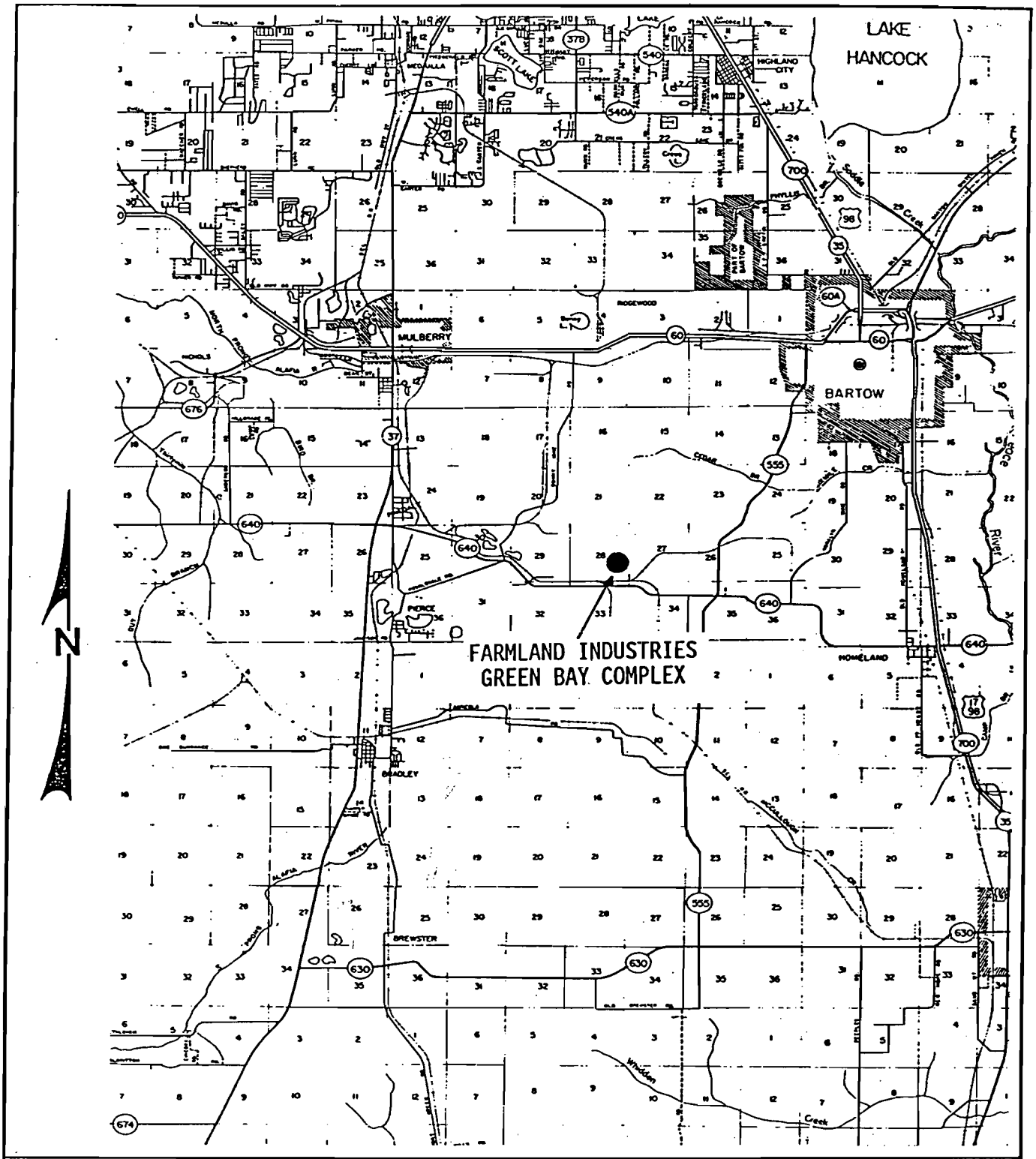


FIGURE 2-1
AREA LOCATION MAP
FARMLAND INDUSTRIES, INC.

KOOGLER & ASSOCIATES

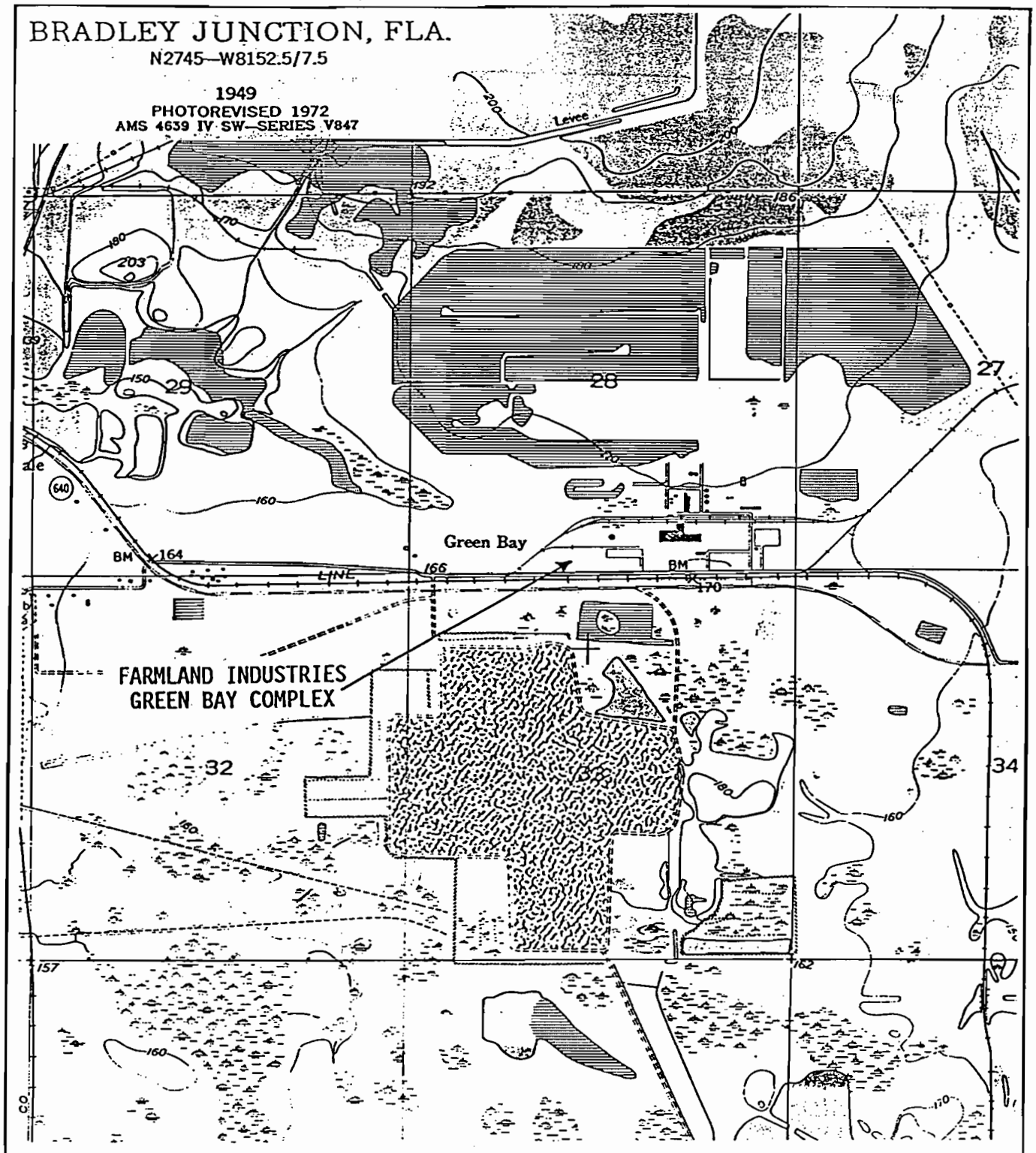


FIGURE 2-2

SITE LOCATION MAP
FARMLAND INDUSTRIES, INC.

SCALE 1:24000

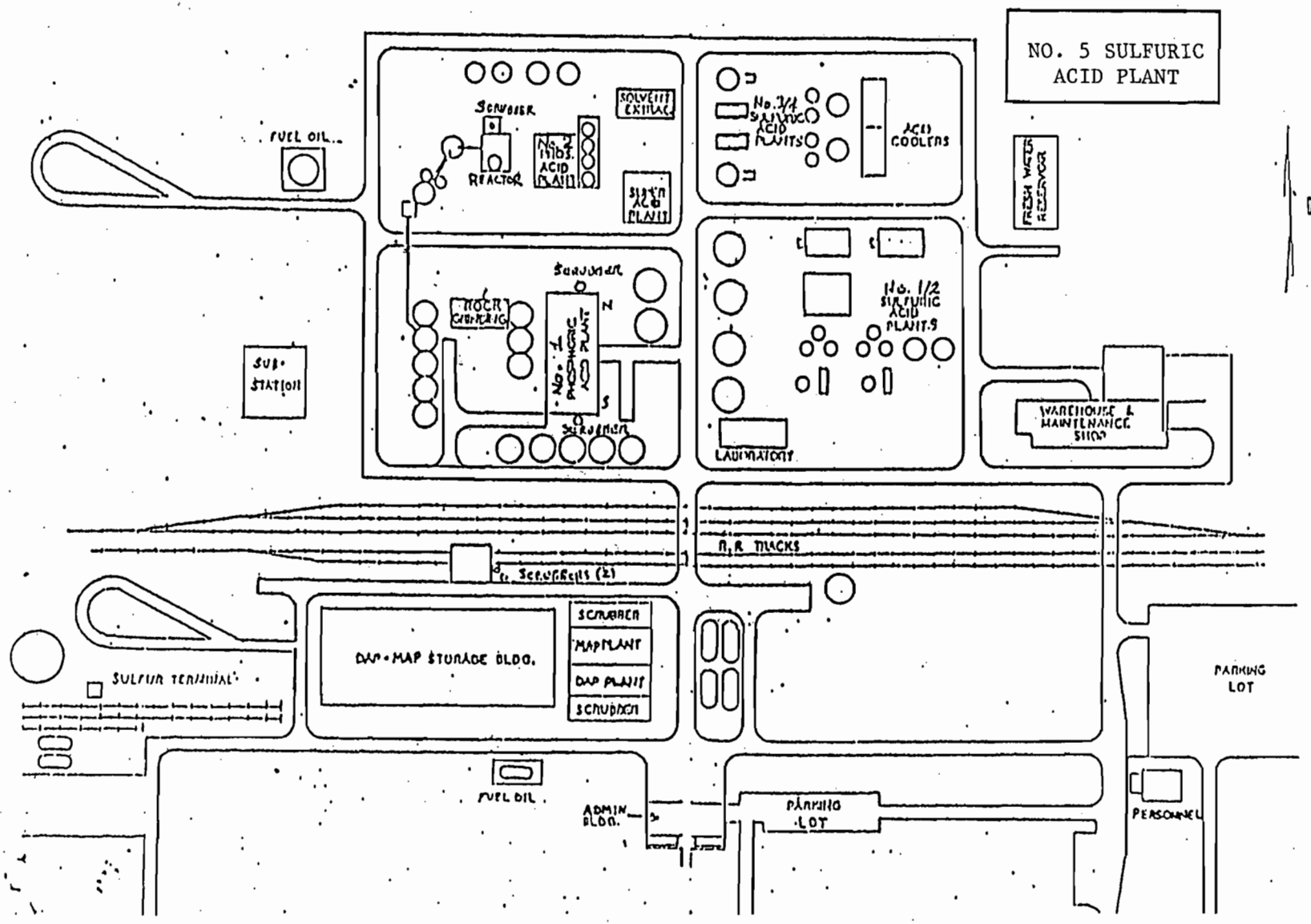


FIGURE 2-3

PLOT PLAN

FARMLAND INDUSTRIES, INC.

3.0 PROPOSED PROJECT

On October 20, 1989, Farmland Industries, Inc. submitted an application to construct a double adsorption sulfuric acid plant (Plant No. 5) rated at 2000 short tons per day of 100 percent H_2SO_4. Presently, Farmland Industries, Inc. is proposing to increase the production rate of Plant No. 5, which is not yet in operation, from 2000 short tons per day to 2400 short tons per day. The plant will also have cogeneration capabilities to generate 38 megawatts of electrical power with excess steam from the new sulfuric acid plant. A typical process flow diagram for double adsorption sulfuric acid plants is presented in Figure 3-1. Figure 3-2 shows the major equipment locations for the plant.

When the No. 5 plant becomes operational, sulfuric acid plant No. 1, rated at 800 tons per day of 100 percent H_2SO_4, will be permanently shutdown. The emission limits for Plant No. 5 will be the Federal New Source Performance Standards as set forth in Rule 17-2.600(2)(b), FAC, i.e., the sulfur dioxide and acid mist emission limits will be 4.0 pounds per ton of 100 percent sulfuric acid and 0.15 pounds per ton of 100 percent sulfuric acid respectively.

Table 3-1 summarizes the permitted, actual and proposed conditions at which sulfuric acid plants No. 1, No. 2, and No. 5 presently operate and will operate. The emission rates for plants No. 1 and 2 and the presently permitted emission rates for plant No. 5 were presented in the application for permit AC53-171751. The rates for plants No. 1 and 2 are presented here for reference. The No. 5 plant is the only sulfuric acid plant at

Farmland which will experience changes. In Table 3-2, the annual air pollutant emission rate changes, based on present, actual and proposed operating conditions, are summarized.

The information tabulated in Tables 3-1 and 3-2 for the sulfuric acid plants shows there will be a significant net increase in the hourly emission rates of sulfur dioxide and sulfuric acid mist. The data also show that there will be less than a significant increase in the annual nitrogen oxides emission rate.

There are no other air pollution sources associated with the requested changes at Farmland Industries, Inc. that would have to be considered in this permit application.

3.1 Rule Applicability

Sulfuric acid plant No. 5 is classified as a new major source subject to both State and Federal regulations as set forth in Rule 17-2.600(2)(b). The proposed increases in sulfur dioxide and acid mist emissions are significant as defined by Rule 17-2.500(2)(e)2, FAC. The modification to the No. 5 sulfuric acid plant will therefore be subject to the full review required of a PSD construction permit application. This will include a determination of Best Available Control technology, an air quality review, and an evaluation of impacts on soils, vegetation and visibility.

The following sections of the application address the changes requested for modifying the No. 5 sulfuric acid plant and include all information

required for the PSD review. The air quality review will look at impacts of sulfur dioxide emissions and acid mist emissions. The review will focus on the changes to be expected from operating the No. 5 sulfuric acid plant and ceasing operations of sulfuric acid plants No. 1 and No. 2.

TABLE 3-1

EXISTING PRODUCTION RATES AND
EMISSION RATES AFFECTED BY PROPOSED
SULFURIC ACID PLANT CHANGES (1)

FARMLAND INDUSTRIES, INC.
POLK COUNTY, FLORIDA

	Sulfuric Acid Plant			
	1(2)	2(2)	5 Permitted	5 Proposed
Date Permitted	1965	1965	1990	NA
Current Permit Conditions				
Rate (TPD)	800	800	2000	-
SO2 (lb/ton)	10.0	10.0	4.0	-
(lb/hr)	330	330	333.3	-
(TPY)	1460	1460	1460	-
Mist (lb/ton)	0.30	0.30	0.15	-
(lb/hr)	9.9	9.9	12.5	-
(TPY)	43.8	43.8	54.8	-
Operating Factor	1.0	1.0	1.0	-
Actual Conditions				
Rate (TPD)	800	800	2000(3)	-
SO2 (lb/ton)	6.5	6.5	4.0	-
(lb/hr)	216.7	216.7	333.3	-
(TPY)	700	700	1460	-
Mist (lb/ton)	0.07	0.07	0.15	-
(lb/hr)	2.3	2.3	12.5	-
(TPY)	7.5	7.5	54.8	-
Operating Factor	0.737	0.737	1.0	-
Proposed Conditions				
Rate (TPD)	0	0	-	2400
SO2 (lb/ton)	0	0	-	4.0
(lb/hr)	0	0	-	400
(TPY)	0	0	-	1752
(lb/ton)	0	0	-	0.15
(lb/hr)	0	0	-	15.0
(TPY)	0	0	-	65.7
Operating Factor	0	0	-	1.0

(1) See Appendix 3-A for calculations of emission rates.
(2) Presented for reference only.
(3) Plant No. 5 is not yet operational. Actual conditions have therefore been set equal to permitted conditions.

TABLE 3-2

ANNUAL AIR POLLUTANT EMISSION CHANGES RESULTING
FROM THE PROPOSED SULFURIC ACID PLANT CHANGES(1)

FARMLAND INDUSTRIES, INC.
POLK COUNTY, FLORIDA

Pollutant Tons/year	Sulfuric Acid Plant 1(2)	2(2)	5 Permitted	5 Proposed
SO2				
Present (actual)	700	700	1460	0
Proposed	0	0	0	1752
Change	(700)	(700)	(1460)	1752
Subtotal			292	
Significant Increase (3)			40	
MIST				
Present (actual)	7.5	7.5	54.8	0
Proposed	0	0	0	65.7
Change	(7.5)	(7.5)	(54.8)	65.7
Subtotal			10.9	
Significant Increase (3)			7	
NOX				
Present (actual)	25.2	25.2	43.4	0
Proposed	0	0	0	52.2
Change	(25.2)	(25.2)	(43.4)	52.2
Subtotal			8.8	
Significant Increase (3)			40	

(1) Based on differences between present, permitting and proposed operating conditions. See Appendix 3-A for calculation of emission rates.
(2) Presented for reference only.
(3) Defined in 17-2.500(2)(e)2, FAC.

NOTE: Rate changes in ( ) represent decreases in annual emissions.

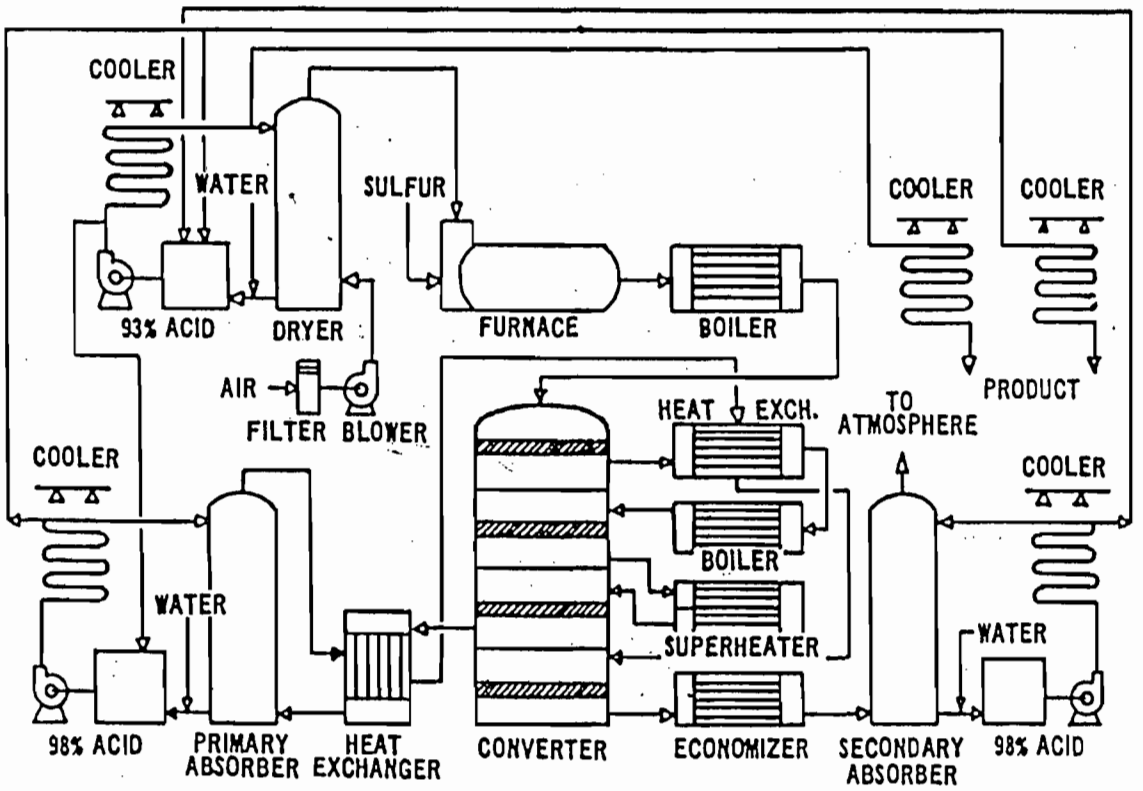
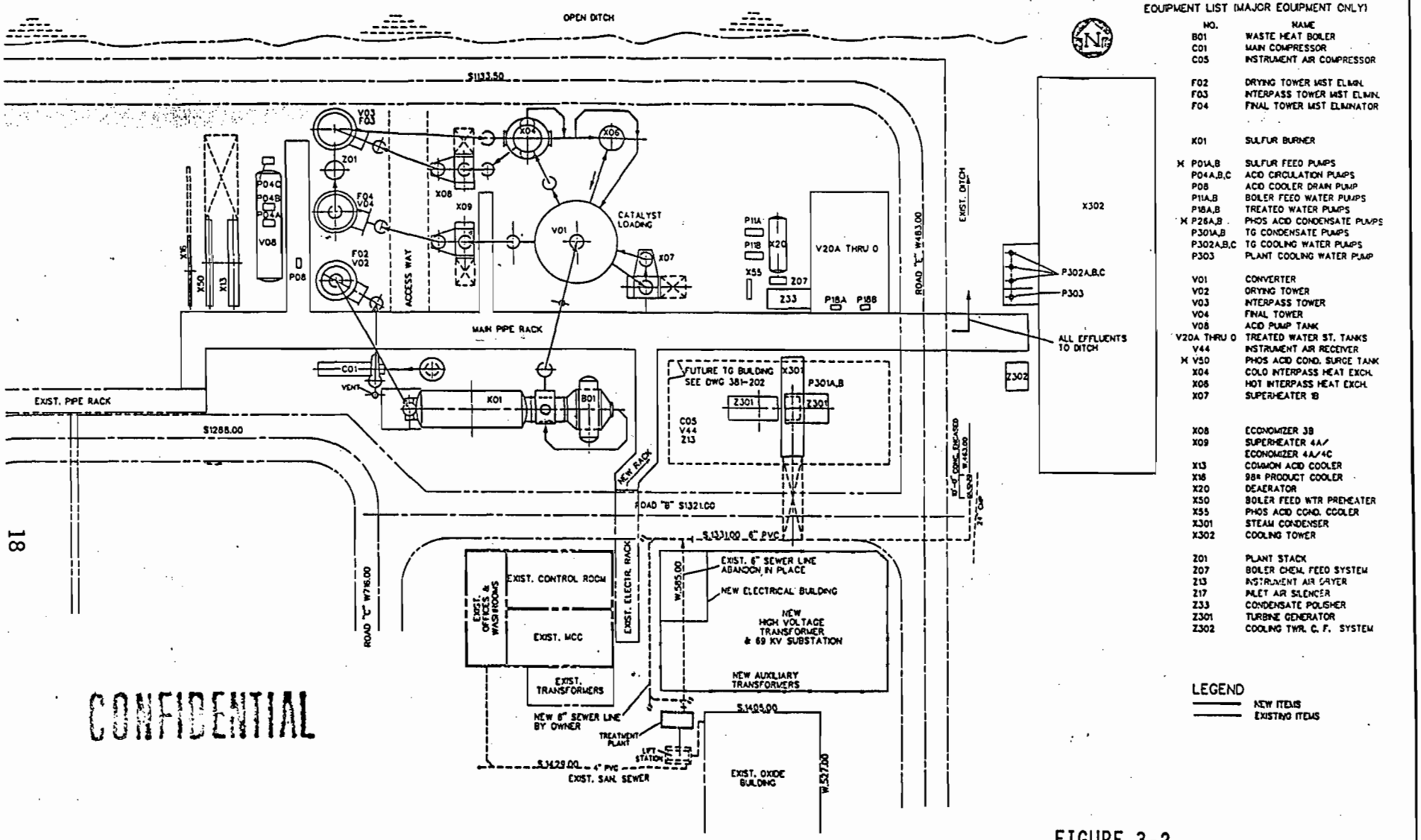


FIGURE 3-1
TYPICAL SULFURIC ACID
DOUBLE ABSORPTION PLANT
PROCESS FLOW DIAGRAM

$S + O_2 \rightarrow SO_2$ (BURNER)

$SO_2 + \frac{1}{2} O_2 \rightleftharpoons SO_3$ (CONVERTER)

$SO_3 + H_2O \rightarrow H_2SO_4$ (ABSORBER)



EQUIPMENT LIST (MAJOR EQUIPMENT ONLY)

NO.	NAME
B01	WASTE HEAT BOILER
C01	MAIN COMPRESSOR
C05	INSTRUMENT AIR COMPRESSOR
F02	DRYING TOWER MST ELMN.
F03	INTERPASS TOWER MST ELMN.
F04	FINAL TOWER MST ELIMINATOR
K01	SULFUR BURNER
P01A,B	SULFUR FEED PUMPS
P04A,B,C	ACID CIRCULATION PUMPS
P08	ACID COOLER DRAIN PUMP
P11A,B	BOILER FEED WATER PUMPS
P18A,B	TREATED WATER PUMPS
P28A,B	PHOS ACID CONDENSATE PUMPS
P301A,B	TG CONDENSATE PUMPS
P302A,B,C	TG COOLING WATER PUMPS
P303	PLANT COOLING WATER PUMP
V01	CONVERTER
V02	DRYING TOWER
V03	INTERPASS TOWER
V04	FINAL TOWER
V08	ACID PUMP TANK
V20A THRU 0	TREATED WATER ST. TANKS
V44	INSTRUMENT AIR RECEIVER
V50	PHOS ACID COND. SURGE TANK
X04	COLD INTERPASS HEAT EXCH.
X06	HOT INTERPASS HEAT EXCH.
X07	SUPERHEATER 1B
X08	ECONOMIZER 3B
X09	SUPERHEATER 4A/ ECONOMIZER 4A/4C
X13	COMMON ACID COOLER
X16	98# PRODUCT COOLER
X20	DEAERATOR
X50	BOILER FEED WTR PREHEATER
X55	PHOS ACID COND. COOLER
X301	STEAM CONDENSER
X302	COOLING TOWER
Z01	PLANT STACK
Z07	BOILER CHEM. FEED SYSTEM
Z13	INSTRUMENT AIR DRYER
Z17	INLET AIR SILENCER
Z33	CONDENSATE POLISHER
Z301	TURBINE GENERATOR
Z302	COOLING TWR. C. F. SYSTEM

LEGEND
- NEW ITEMS
- EXISTING ITEMS

CONFIDENTIAL

FIGURE 3-2
PLANT LAYOUT FOR NEW
2000 TPD SULFURIC ACID PLANT

SOURCE: MONSANTO ENVIRO-CHEM SYSTEMS, INC.

KOOGLER & ASSOCIATES

APPENDIX 3-A

EMISSION RATE CALCULATIONS

EMISSION RATE CALCULATIONS

SULFURIC ACID PLANTS NO. 1 AND NO. 2 (FOR REFERENCE ONLY)

PERMITTED: 800 tons per day 100% acid
SO2 - 10 lb/ton, 330 lb/hr
Mist - 0.30 lb/ton, 9.9 lb/hr
Operating Factor - 1.0
(Based on Permits No. A053-99016 and A053-99018)

ACTUAL: 800 tons per day 100% acid
SO2 - 6.50 lb/ton
Mist - 0.07 lb/ton
Operating Factor - 0.737, Annual, based on historic production data documented in Appendix 3-B

PROPOSED: Both plants to be permanently shutdown

NOX: 111,547 dscf per ton of 100% acid (See Appendix 3-B)
2.1 x 10(-6) lb NOX per dscf (See IMC-New Wales PSD application for third train expansion)

EMISSION RATES (each plant)

Actual

SO2: Hourly = 6.50 lb/ton x 800/24 ton/hr
= 216.7 lb/hr

Annual = 216.7 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 0.737
= 700 TPY

MIST: Hourly = 0.07 lb/ton x 800/24 ton/hr
= 2.3 lb/hr

Annual = 2.3 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 0.737
= 7.5 TPY

NOX Hourly = 800 ton/day x 111547 dscf/ton x 2.1 x 10(-6) lb/dscf x 1/24 day/hr
= 7.8 lb/hr

Annual = 7.8 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 0.737
= 25.2 TPY (5.75 lb/hr, equivalent annual average for modeling purposes)

NOTE: No other air pollutants are discharged from Sulfuric Acid Plants No. 1 and No. 2.

EMISSION RATE CALCULATIONS

SULFURIC ACID PLANT NO. 5 (PERMITTED/ACTUAL)

PROPOSED: 2000 tons per day 100% acid
SO2 - 4.0 lb/ton
Mist - 0.15 lb/ton
Operating Factor - 1.0

NOX: 56739 dscf per ton of 100% acid (Based on Monsanto Enviro-Chem Systems, Inc. design)
2.1 x 10(-6) lb NOX per dscf (See IMC-New Wales PSD application for third train expansion)

EMISSION RATES

Proposed

SO2: Hourly = 2000 ton/day x 4.0 lb/ton x 1/24 day/hr
= 333.3 lb/hr

Annual = 333.3 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 1.0
= 1460 TPY

MIST: Hourly = 2000 ton/day x 0.15 lb/ton x 1/24 day/hr
= 12.5 lb/hr

Annual = 12.5 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 1.0
= 54.8 TPY

NOX Hourly = 2000 ton/day x 56739 dscf/ton x 2.1 x 10(-6) lb/dscf x 1/24 day/hr
= 9.9 lb/hr

Annual = 9.9 lb/hr x 8760 hr/yr x 1/2000 ton/lb x 1.0
= 43.4 TPY

NOTE: No other air pollutants are discharged from Plant No. 5.

EMISSION RATE CALCULATIONS

SULFURIC ACID PLANT NO. 5 (PROPOSED)

PROPOSED: 2400 tons per day 100% acid
SO2 - 4.0 lb/ton
Mist - 0.15 lb/ton
Operating Factor - 1.0

NOX: 56739 dscf per ton of 100% acid (Based on Monsanto Enviro-Chem Systems, Inc. design)
2.1 x 10(-6) lb NOX per dscf (See IMC-New Wales PSD application for third train expansion)

EMISSION RATES

Proposed

SO2: Hourly = 2400 ton/day x 4.0 lb/ton x 1/24 day/hr
= 400 lb/hr

Annual = 400 lb/hr x 8760 hr/yr x 1/2400 ton/lb x 1.0
= 1752 TPY

MIST: Hourly = 2400 ton/day x 0.15 lb/ton x 1/24 day/hr
= 15.0 lb/hr

Annual = 15.0 lb/hr x 8760 hr/yr x 1/2400 ton/lb x 1.0
= 65.7 TPY

NOX Hourly = 2400 ton/day x 56739 dscf/ton x 2.1 x 10(-6) lb/dscf x 1/24 day/hr
= 11.9 lb/hr

Annual = 11.9 lb/hr x 8760 hr/yr x 1/2400 ton/lb x 1.0
= 52.2 TPY

NOTE: No other air pollutants are discharged from Plant No. 5.

4.0 BEST AVAILABLE CONTROL TECHNOLOGY

Best Available Control Technology (BACT) is required to control air pollutants emitted from newly constructed major sources or from modification to the major emitting facilities if the modification results in significant increase in the emission rate of regulated pollutants. The significance of an emission rate increase is defined by Rule 17-2.500(2)(e)(2), FAC.

The emission rate increases proposed by Farmland have been summarized in Table 3-2. The increases will result from increasing the production rate of a newly constructed double absorption sulfuric acid plant from 2000 tons per day to 2400 tons per day of 100 percent sulfuric acid. From Table 3-2 it will be noted that sulfur dioxide and sulfuric acid mist emissions from the No. 5 sulfuric acid plant at 2400 tons per day will represent a significant increase over emissions from the plant as permitted at 2000 tons per day. The increase in nitrogen oxides emissions from the plant will be less than de minimis.

Sulfur dioxide and acid mist are present in the tail gas from all contact processed sulfuric acid plants. In a typical plant with the single absorption system, the sulfur dioxide in the tail gas is approximately 30 pounds per ton of acid produced and the acid mist is approximately four pounds per ton of acid produced. The nitrogen oxides that are present in the tail gas are formed in the sulfur burners as a result of the fixation of atmospheric nitrogen. Measurements have indicated that the

concentration of nitrogen oxides in the tail gas and sulfuric acid plant is in the range of 18-20 parts per million (volume).

4.1 Emission Standards for Sulfuric Acid Plants

Federal New Source Performance Standards (NSPS) for sulfuric acid plants became effective on August 17, 1971. These standards are codified in 40 CFR 60, Subpart H and require sulfur dioxide emissions to be limited to no more than 4.0 pounds per ton of 100 percent acid produced and require that sulfuric acid mist emissions be limited to no more than 0.15 pounds per ton of 100 percent acid produced. Additionally, the standards limit the opacity of the emissions from new sulfuric acid plants to less than 10 percent. There are no emission standards for nitrogen oxides.

When EPA reviewed the New Source Performance Standards for sulfuric acid plants in 1985 (EPA-450/3-85-012), it was concluded that because of variations in sulfur dioxide emissions as a function of catalyst age, "... the level of SO_2 emissions as specified in the current NSPS (should) not be changed at this time." Regarding the NSPS for sulfuric acid mist, EPA concluded, "Making the acid mist standard more stringent is not believed to be practical at this time because of the need to provide a margin of safety due to in-plant operating fluctuations, which introduce variable quantities of moisture into the sulfuric acid production line."

A review of BACT/LAER determinations published in the EPA Clearinghouse indicates that no new control alternatives have been applied to sulfuric

acid plants since 1990 that would result in a consistent reduction in sulfur dioxide emission below 4.0 pounds per ton of acid nor would result in a consistent reduction of sulfuric acid mist emissions below 0.15 pounds per ton of acid. No control technologies for nitrogen oxides are discussed in either the NSPS review or in BACT/LAER determinations.

4.2 Control Technologies

The control of sulfur dioxide and sulfuric acid mist emissions from sulfuric acid plants can be achieved by various processes. The process of choice for sulfur dioxide control has been dual absorption and the process of choice for controlling sulfuric acid mist emission has been one of the various types of fiber mist eliminators. These processes have been selected based on cost, product recovery, the formation of no undesirable by-products and the fact that neither introduces operating processes that are foreign to plant personnel.

EPA published a review of NSPS for sulfuric acid plants in March 1985 (EPA-450/3-85-012). Another review of NSPS by EPA is currently due but probably will not be published before the early 1990's. In the 1985 report, EPA reviewed 46 sulfuric acid plants built between 1971 and 1985. Of these 46 plants, 40 used the dual absorption process for sulfur dioxide control with the remaining six using some type of acid gas scrubbing. All 46 plants used the high efficiency mist eliminators for acid mist control. The control of nitrogen oxides in sulfur acid plants has not been addressed to date because of the low concentration of nitrogen oxides

in the tail gases of sulfuric acid plants. The nitrogen oxide concentration in the tail gas stream of a typical sulfuric acid plant is in the range of 20 parts per million. This equates to a mass emission rate of nitrogen oxide of approximately 10 pounds per hour or approximately 0.03 pounds per million Btu. As a point of comparison, NSPS for fossil fuel fired steam generators limit nitrogen oxides emissions to 0.1-0.8 pounds per million Btu heat input, depending upon the type of fuel used.

In the March 1985 review (EPA-450/3-85-012), EPA reviewed the control technologies that had been used to control sulfur dioxide and sulfuric acid mist emissions from sulfuric acid plants. The alternatives included the dual absorption process, ammonia scrubbing, sodium sulfite-bisulfite scrubbing, and molecular sieves for sulfur dioxide control and filter type mist eliminators and electrostatic precipitators for sulfuric acid mist control. A review of the EPA BACT/LAER Clearinghouse information indicated that no other control alternatives have been considered for sulfuric acid plants. No control alternatives were addressed for nitrogen oxides control in either the 1985 EPA NSPS review or in the BACT/LAER Clearinghouse.

4.2.1 Sulfur Dioxide Control

The control alternatives for sulfur dioxide have been summarized based upon information compiled by EPA in the 1985 NSPS review for sulfur acid plants. As stated earlier, EPA is due to review these standards again but

will probably not publish the results of their review until sometime in the early 1990's.

4.2.1.1 Dual Absorption Process

The dual absorption process has become the SO_2 control system of choice within the sulfuric acid industry since the promulgation of NSPS in 1971. Of the 46 new sulfuric acid plants constructed between 1971 and 1985, 40 employed this process for sulfur dioxide control. The process offers the following advantages over other SO_2 control technologies:

1. 99.4 percent of the sulfur is converted to sulfuric acid compared with 97.7 percent conversion with a single absorption plant followed by scrubbing;

2. there are no by-products produced;

3. there are no new operating processes that plant personnel must become familiar with;

4. the process permits higher inlet sulfur dioxide concentrations resulting in a reduction in equipment size;

5. there is no reduction in overall plant operating time efficiency; and

6. there is no increase in manpower requirements.

The dual absorption process is capable of reducing sulfur dioxide emission rates to less than 4.0 pounds per ton of acid as required by New Source Performance Standards. The information reviewed by EPA indicates that even lower sulfur dioxide emission levels occur with new catalyst but as the catalyst ages, the conversion efficiency drops and sulfur dioxide emission rates begin to approach the 4.0 pound per ton limit.

4.2.1.2 Sodium Sulfite-Bisulfite Scrubbing

Between 1971 and 1985, two sulfuric acid plants were constructed employing sodium sulfite-bisulfite scrubbing to control sulfur dioxide emissions. One of the plants was subsequently converted to ammonia scrubbing and the second plant has never been used. As a result, sodium sulfite-bisulfite scrubbing is not considered a demonstrated sulfur dioxide control alternative.

4.2.1.3 Ammonia Scrubbing

Ammonia scrubbing uses anhydrous ammonia and water in a scrubbing system to convert sulfur dioxide to ammonium sulfate. Depending upon the market, the ammonium sulfate can be converted to a fertilizer grade product.

Five sulfuric acid plants constructed between 1971 and 1985 use ammonia scrubbing for sulfur dioxide control. The process has proved effective

for reducing sulfur dioxide emissions to below 4.0 pounds per ton and also for controlling sulfuric acid mist emissions.

The major disadvantages of the ammonia scrubbing system, when compared with the dual absorption process are:

1. a waste by-product is produced unless there is a market for fertilizer grade ammonium sulfate;

2. the scrubbing system introduces a process that is foreign to sulfuric acid plant operators;

3. the scrubbing system is a high maintenance item and requires additional manpower for operation; and

4. no sulfuric acid plant size reduction benefits are achieved with the scrubbing system.

4.2.1.4 Molecular Sieves

A molecular sieve was installed at one sulfuric acid plant in Florida for sulfur dioxide control. Extensive operating problems were experienced as the molecular sieve absorbed nitrogen oxides as well as sulfur dioxide. The regeneration of these gases resulted in the formation of nitric acid within the sulfuric acid plant. The nitric acid/sulfuric acid mixture resulted in severe corrosion problems which caused the molecular sieve

system to be scrapped. As a result, molecular sieves are not considered a viable alternative for sulfur dioxide control in the sulfuric acid industry.

4.2.2 Sulfuric Acid Mist Control

Control alternatives that were reviewed by EPA in the 1985 New Source Performance Standards review are summarized in the following sections.

4.2.2.1 Fiber Mist Eliminators

The 46 new sulfuric acid plants constructed between 1971 and 1985, all used the fiber type mist eliminators for sulfuric acid mist control. Operations demonstrated that these types of mist eliminators can control sulfuric acid mist emissions to less than 0.15 pounds per ton of sulfuric acid.

The mist eliminators are the choice of control for sulfuric acid mist within the sulfuric acid industry because they require very little operation and maintenance attention and because of the small space requirement associated with these devices. The disadvantage of this type of mist eliminator is that the pressure drop across the elements varies from five to 15 inches of water; resulting in an increase in operating utility costs.

4.2.2.2 Electrostatic Precipitators

The electrostatic precipitators have the potential for controlling sulfuric acid mist emissions from sulfuric acid plants; however, there is no demonstrated application of precipitators. The disadvantages associated with precipitators, and hence, the reason they have not been used, include the initial cost, size requirements, operating and maintenance requirements and the potential for corrosion. The advantage of the precipitator is that it would operate at a low pressure drop; approximately 0.5 inches of water.

4.3 Cost Analysis

In reviewing the cost analyses presented in this section, it should be recognized that the two control alternatives that have been analyzed for sulfur dioxide achieved about the same degree of efficiency; i.e, there is no advantage of one system over the other from the standpoint of the level of sulfur dioxide control that can be achieved. The same holds true for the control alternatives evaluated for sulfuric acid mist; both alternatives (fiber mist eliminators and electrostatic precipitators) are capable of achieving approximately the same degree of acid mist control.

Hence, the choice of the control alternative for sulfur dioxide and the control alternative for sulfuric acid mist can be made on the basis of cost, operating familiarity and operating convenience.

In Tables 4-1 and 4-2, the capital costs and annual costs of controlling sulfur dioxide emissions by dual absorption and by ammonia scrubbing are presented. In Table 4-3 and 4-4, similar costs are presented for controlling sulfuric acid mist emissions by fiber mist eliminators and electrostatic precipitators. The cost data are based upon analyses presented in EPA-450/3-85-012 and in EPA-450/3-76-014 (Capital and Operating Costs of Selected Air Pollution Control Systems); both updated to 1989 costs. The capital recovery in the annual cost calculation is based upon a 10 percent rate of return and a 10 year equipment life.

The cost analyses demonstrate that the annual cost of the dual absorption process for sulfur dioxide is less than half the annual cost for ammonia scrubbing. Similarly the annual cost for sulfuric acid mist with the fiber type mist eliminators is approximately one-fourth the annual cost of controlling acid mist with electrostatic precipitators. As the two control alternatives for sulfur dioxide and the two control alternatives for sulfuric acid mist are capable of the same level of control, it is evident why the dual absorption and the fiber type mist eliminators have been the control alternatives of choice for sulfur dioxide and sulfuric acid mist, respectively.

4.4 Conclusion

Based upon the analysis presented in previous sections, the dual absorption process had been selected by Farmland as the control alternative for sulfur dioxide control and the fiber type high efficiency

mist eliminator has been selected for sulfuric acid mist control. The dual absorption system will be operated with catalyst screening and make up every three to five years as is typical in the industry.

There is no effective and demonstrated technology for controlling nitrogen oxides emissions from sulfuric acid plants. Farmland will minimize these emissions by operating the sulfur burner of the No. 5 sulfuric acid plant within the limits established by the designer.

TABLE 4-1

COST ANALYSIS FOR SO2 CONTROL BY DUAL ABSORPTION
2400 TPD CONTACT SULFURIC ACID PLANT

FARMLAND INDUSTRIES, INC.
GREEN BAY, FLORIDA

CAPITAL COST		
Direct		
Absorber	1,237,000	
Pumps	248,000	
Piping	371,000	
Heat Exchanger	619,000	
		$2,475,000
Indirect		
Engineering and Supervision	248,000	
Construction	138,000	
Contractor	149,000	
Contingency	296,000	
		831,000
TOTAL CAPITAL COST		$3,306,000
ANNUAL COST		
Direct		
Operating Labor and Supervision	8,000	
Maintenance Labor	6,500	
Maintenance Materials	8,000	
Utilities	2,638,000	
Catalyst	36,000	
		$2,697,500
Indirect		
OH	9,500	
Payroll	4,000	
		13,500
Capital Recovery		539,000
Insurance and Taxes		132,000
Credit for Acid Recovery		(1,020,000)
TOTAL ANNUAL COST		$2,362,000

TABLE 4-2

COST ANALYSIS FOR SO2 CONTROL BY AMMONIA SCRUBBING
2400 TPD CONTACT SULFURIC ACID PLANT

FARMLAND INDUSTRIES, INC.
GREEN BAY, FLORIDA

CAPITAL COST		
Direct		
Scrubber and Auxiliaries		$3,771,000
Indirect		
Engineering and Supervision	377,000	
Construction	301,000	
Contractor	226,000	
Contingency	452,000	
		1,356,000
TOTAL CAPITAL COST		$5,127,000
ANNUAL COST		
Direct		
Operating Labor and Supervision	540,000	
Maintenance Labor	80,000	
Maintenance Materials	95,000	
Utilities	274,000	
Chemicals	2,314,000	
		$3,303,000
Indirect		
OH	369,000	
Payroll	124,000	
		493,000
Capital Recovery		836,000
Insurance and Taxes		205,000
TOTAL ANNUAL COST		$4,837,000

TABLE 4-3

COST ANALYSIS FOR ACID MIST CONTROL BY FIBER TYPE MIST ELIMINATORS
2400 TPD CONTACT SULFURIC ACID PLANT

FARMLAND INDUSTRIES, INC.
GREEN BAY, FLORIDA

CAPITAL COST		
Direct		$ 76,000
Indirect		36,000
TOTAL CAPITAL COST		$ 112,000
ANNUAL COST		
Direct		
Utilities		$ 174,000
Indirect		
Capital Recovery	18,000	
Insurance and Taxes	5,000	
		23,000
Credit for Acid Recovery		(114,000)
TOTAL ANNUAL COST		$ 83,000

TABLE 4-4

COST ANALYSIS FOR ACID MIST CONTROL BY ELECTROSTATIC PRECIPITATOR
2400 TPD CONTACT SULFURIC ACID PLANT

FARMLAND INDUSTRIES, INC.
GREEN BAY, FLORIDA

CAPITAL COST		
Direct		
Collector	379,000	
Auxiliaries	131,000	
		$ 510,000
Indirect		
Engineering and Supervision	51,000	
Construction	40,000	
Contractor	31,000	
Contingency	61,000	
		183,000
TOTAL CAPITAL COST		$ 693,000
ANNUAL COST		
Direct		
Operating Labor and Supervision	23,000	
Maintenance Labor	20,000	
Maintenance Materials	36,000	
Utilities	60,000	
		$ 139,000
Indirect		
OH	25,000	
Payroll	9,000	
		34,000
Capital Recovery		113,000
Insurance and Taxes		27,000
TOTAL ANNUAL COST		$ 313,000

5.0 IMPACTS ON SOILS, VEGETATION AND VISIBILITY

The land-use in the vicinity of Farmland Industries, Inc. is a mixture of unimproved land, pasture land and land which has been mined for phosphate rock. The town of Bartow is located about six miles northeast of the site and Mulberry is located about eight miles northwest of the site. Additionally, there are scattered residences between Farmland and the two population centers. The No. 5 sulfuric acid plant is not expected to have any significant impact on activities in the area. Air quality modeling has demonstrated that sulfur dioxide levels which will exist after the proposed modifications will not differ significantly from current levels. Also, modeling has indicated that there will not be a significant impact from either sulfuric acid mist or nitrogen oxides emissions. Thus it is expected that the proposed expansion will not adversely impact soils, vegetation and visibility in the area.

The proposed modification will require a minimal increase in personnel to operate the cogeneration facility. Also, the increase in sulfuric acid production may cause a slight increase in truck deliveries of molten sulfur. Both of these changes will have a slight impact on traffic in the area, but when compared with traffic levels that presently exist, the increases will not be significant.

6.0 GOOD ENGINEERING PRACTICE STACK HEIGHT

The criteria for good engineering practice stack height in Rule 17-2.270 states that the height of a stack should not exceed the greater of 65 meters (213) feet or the height of nearby structures plus the lesser of 1.5 times the height or cross-wind width of the nearby structure. This stack height policy is designed to prevent achieving ambient air quality goals solely through the use of excessive stack heights and air dispersion.

Based on this policy, the limiting height for the new sulfuric acid plant stack is 213 feet. Farmland intends to construct a stack which will be 150 feet in height above-grade. This stack will satisfy the good engineering practice stack height criteria and will not result in excessive concentrations of air pollutants as a result of plume downwash as the stack will be at least 2.5 times the height of nearby structures.

7.0 AIR QUALITY REVIEW

The air quality review required of a PSD construction permit application potentially requires both air quality modeling and air quality monitoring. The air quality monitoring is required when the impact of air pollutant emission increases and decreases associated with a proposed project exceed the de minimis impact levels defined by Rule 17-2.500(3)(e)1, FAC or in cases where an applicant wishes to define existing ambient air quality by monitoring rather than by air quality modeling. The air quality modeling is required to provide assurance that the increases and decreases in air pollutant emissions associated with the project, combined with all other applicable air pollutant emission rate increases and decreases associated with new sources affecting the project area, will not cause or contribute to an exceedance of the applicable PSD increments (defined by Rule 17-2.310, FAC). Additionally, the air quality modeling is required to provide assurance that the emissions from the proposed project, together with the emissions of all other air pollutants in the project area, will not cause or contribute to a violation of any ambient air quality standard.

The de minimis impact levels or the air pollutants associated with the proposed project are:

Sulfur Dioxide	-	13.0 micrograms per cubic meter, 24-hour average
Sulfuric Acid Mist	-	NA

The proposed project involves increasing the permitted production rate of the newly constructed No. 5 sulfuric acid plant from 2000 to 2400 tons per day of 100 percent sulfuric acid. A project permitted in January 1990 by Farmland Industries, Inc. involved the construction of the No. 5 sulfuric acid plant (permitted at 2000 tons per day) and the shutdown of the No. 1 and No. 2 sulfuric acid plants (each rated at 800 tons per day of 100 percent sulfuric acid). This project was permitted by permits AC53-171751 and PSD-FL-143. Included in the application for AC53-171751 was the influence of nitrogen oxides emissions from a green superphosphoric acid plant; a plant resulting in a contemporaneous emission increase.

The air quality review for AC53-171751 included emission increases and decreases associated with the No. 1, No. 2 and No. 5 sulfuric acid plants and the green superphosphoric acid plant. The modeling associated with this review demonstrated that:

(1) the impact of sulfur dioxide emission increases and decreases would not be significant at any distance for any averaging time;

(2) the impact of sulfuric acid mist emissions would not exceed an acceptable ambient level; and

(3) the impact of nitrogen oxides emissions would not cause or contribute to a violation of air quality standards.

As the presently proposed project closely follows the project permitted

by AC53-171751, the air quality modeling for sulfur dioxide and sulfuric acid mist presented herein includes the emission decreases addressed in the application for AC53-171751 plus the increases associated with sulfuric acid plant No. 5 operating at 2400 tons of sulfuric acid per day. This approach will provide the Department with assurance that changes from the baseline that existed prior to the permitting of the No 5 sulfuric acid plant will not result in significant increases in sulfur dioxide or sulfuric acid mist levels in the atmosphere. Nitrogen oxides are not addressed in this air quality review as they were adequately addressed in the application for AC53-171751 and the increases in nitrogen oxides emissions resulting from the project proposed herein are less than de minimis. As the presently proposed increase in nitrogen oxides emissions are less than de minimis, no air quality review is required.

The modeling that has been conducted demonstrates that the net impact of the sulfur dioxide emissions increases addressed in this application and the decreases addressed in the application for AC53-171751 are less than the de minimis impact levels defined by Rule 17-2.500(3)(e)1, FAC and summarized above. Furthermore, the applicant does not intend to define existing ambient sulfur dioxide levels by air quality monitoring. Hence, air quality monitoring is not a requirement of this application.

The air quality modeling that has been conducted demonstrates that the net impact sulfur dioxide emissions from the sulfuric acid plants (increased emissions from proposed Plant No. 5 and the decrease in emissions resulting from the shut-down of Plants 1 and 2) is not significant for the

three-hour, 24-hour or annual periods. Significant, as used in this instance, is defined by Rule 17-2.100(171)(a), FAC. The modeling further shows the net impact of sulfuric acid mist emissions associated with the proposed project is approximately one-tenth of an Acceptable Ambient Level (AAL) defined as a multiple of the Threshold Limit Value for sulfuric acid mist and that acid mist emissions from the three sulfuric acid plants that will operate at Farmland (Nos. 3, 4 and 5) will result in an impact that is about equal to the AAL.

In the following sections, the air quality modeling for sulfur dioxide and sulfuric acid mist is described.

7.1 Air Quality Modeling for Sulfur Dioxide

As previously described, the net change in the emissions rate of sulfur dioxide used for air quality modeling purposes is defined as the emission rate increase associated with sulfuric acid plant No. 5 operating at 2400 tons per day minus the actual sulfur dioxide emissions associated with the shut-down of existing sulfuric acid Plants 1 and 2. These emission rates are addressed in Section 3.0 of this application.

The impact of the net change in sulfur dioxide emissions was assessed with the Industrial Source Complex - Short Term (ISC-ST) air quality model. The modeling was conducted in accordance with guidelines established by EPA and published in the document, Guideline for Air Quality Modeling, (Revised), July 1986. The meteorological data used with the model were

for Orlando, Florida and represented the period 1974-1978.

The sulfur dioxide emissions associated with the project included the increase in emissions associated with the No. 5 sulfuric acid plant and the decrease in emissions associated with the shut-down of existing Plants 1 and 2. The sulfur dioxide emissions from plant No. 5 were based upon a sulfur dioxide emission limit of 4.0 pounds per ton of 100 percent sulfuric acid and a production rate of 2400 tons of 100 percent acid per day. This resulted in an hourly sulfur dioxide emission rate of 400.0 pounds per hour. For modeling purposes, it was assumed that the plant would operate 8,760 hours a year.

The decreases in sulfur dioxide emissions from plants No. 1 and No. 2 were defined as the decrease in actual sulfur dioxide emissions. These emission rates (see Section 3.0) were based on a sulfuric acid production rate of 800 tons of 100 percent sulfuric acid per day for each of the two plants, a sulfur dioxide emission rate of 6.5 pounds per ton of 100 percent acid produced and an annual production-based operating factor of 0.737. These conditions result in a decrease in actual sulfur dioxide emissions of 216.7 pounds per hour and 25.2 tons per year from each of the two plants. Plant characteristics used for the modeling are summarized in Table 7-1.

The modeling conducted with the ISC-ST air quality model was conducted in accordance with EPA guidelines and included receptors established by the polar grid system extending to 15.0 kilometers from the plant. Twelve

sets of receptor rings were placed at distances ranging from 0.1 to 15.0 kilometers from the plant with receptors placed at 10 degree intervals on each receptor ring.

The results of the air quality modeling, summarized in Table 7-2, demonstrate that the impact of the proposed project is not significant for the three-hour, 24-hour or annual time periods. Modeling shows that there will be a net improvement in air quality on an annual basis; that the maximum sulfur dioxide increase for the 24-hour period will be less than 0.0001 micrograms per cubic meter (at a distance of 400 meters from the plant); and that the maximum sulfur dioxide increase for the three-hour period will be less than 0.01 micrograms per cubic meter (also at 400 meters from the plant). As the net impact of the sulfur dioxide emission rate changes resulting from the proposed project are not significant for any time period, no further air quality modeling is required for sulfur dioxide.

7.2 Air Quality Modeling for Nitrogen Oxides

Air quality modeling for nitrogen oxides is not required as the increase in nitrogen oxides emissions associated with the increased production in the No. 5 sulfuric acid plant is less than 40 tons per year (less than the de minimis emission rate increase). Modeling conducted in support of the application for AC53-171751 showed that the maximum expected ambient nitrogen oxides concentration in the vicinity of Farmland Industries, Inc. as a result of emissions from all sources impacting the area, would be 7.6

micrograms per cubic meter, annual average. This compares with the ambient air quality standard for nitrogen oxides of 100 micrograms per cubic meter, annual average. The 8.8 ton per year increase in nitrogen oxides emissions associated with the proposed production rate increase in the No. 5 sulfuric acid plant is not expected to significantly change the maxim expected nitrogen oxides concentration.

7.3 Air Quality Modeling for Sulfuric Acid Mist

No ambient air quality standards, PSD increments or significant impact levels have been established for sulfuric acid mist. For purposes of this permit application, an Acceptable Ambient Level (AAL) was developed by dividing the Threshold Limit Value of 1,000 micrograms per cubic meter by 210. The factor of 210 includes of a factor of 4.2 to convert the eight-hour per day, five day per week exposure allowed by the Threshold Limit Value to a 24-hour per day, seven day per week exposure; that is, (24 x 7)/(8 x 5). In addition to the factor of 4.2, a safety factor of 50 was applied to reduce the exposure established for the working population to an exposure that is applicable to the general population. The factor of 50 was selected as sulfuric acid mist is not considered a highly toxic material. The 24-hour AAL that has been established based upon these factors is 5.0 micrograms per cubic meter.

The air quality modeling that was conducted to evaluate the impact of sulfuric acid mist emissions from the Farmland facility on was conducted with ISC-ST air quality model using the guidelines used for sulfuric acid

modeling and described in Section 7.1 of this application. The receptor grid used was identical to the polar coordinate system used in the sulfur dioxide modeling.

The modeling was conducted to determine the net impact of the emission increases associated with the production rate increase in the No. 5 sulfuric acid plant and the decreases associated with the shutdown of the No. 1 and No. 2 sulfuric acid plants. Also, modeling was conducted to determine the impact of sulfuric acid mist emissions from the existing sulfuric acid plants No. 3 and No. 4 plus the emissions from plant No. 5 while operating at 2400 tons per day. The latter assessment was to determine the impact of sulfuric acid mist emissions from the three sulfuric acid plants that will operate at Farmland once the proposed project is completed.

The results of the air quality modeling are summarized in Table 7-3. The result of the modeling demonstrate that the maximum expected increase in ambient sulfuric acid mist levels associated with the shutdown of the No. 1 and No. 2 plants and the operation of plant No. 5 at 2400 tons per day of 100 percent sulfuric acid will be approximately 0.5 micrograms per cubic meter averaged over a 24-hour period. The modeling also shows that the maximum expected sulfuric acid mist impact resulting from the operations of Plants 3, 4 and 5 will be approximately 5.1 micrograms per cubic meter, 24-hour average, at a distance of 1.0 kilometers from the plants. These impacts compare with the AAL for sulfuric acid mist of 5.0 micrograms per cubic meter, 24-hour average.

The impact of sulfuric acid mist emissions from sources outside the Farmland chemical complex were not included in the air quality review based upon an engineering judgment. It was estimated that because of the expected magnitude of the sulfuric acid mist emissions from other sources and the distances of these sources from Farmland, it would be very unlikely that any of the sources, individually or collectively, will result in a significant contribution to ambient acid mist levels in the project area.

TABLE 7-1

PLANT CHARACTERISTICS USED FOR AIR QUALITY MODELING

FARMLAND INDUSTRIES, INC.
POLK COUNTY, FLORIDA

PLANT	STACK		STACK GAS		EMISSION RATES (1)					
					SO2		Acid Mist		NOx	
	Ht (ft)	Dis (ft)	Vel (FPS)	Temp (°F)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)
H2SO4 #1	100	4.5	66.2	100	216.7	700	2.3	7.5	7.8	25.2
H2SO4 #2	100	4.5	66.2	100	216.7	700	2.3	7.5	7.8	25.2
H2SO4 #5	150	8.0	37.9	180	400.0	1752	15.0	65.7	11.9	52.2

(1) Annual emission rates are based on the following assumptions:

(a) H2SO4 #1 and #2 - An annual operating factor, based on production, of 0.737.
(b) H2SO4 #5 - Operating time will be 8760 hours/year.

TABLE 7-2

SUMMARY OF SULFUR DIOXIDE IMPACT ANALYSIS

FARMLAND INDUSTRIES, INC.
POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	SULFUR DIOXIDE IMPACT (ug/m^3)		
	ANNUAL	3-HOUR	24-HOUR
1974	< 0	0.01	< 0.01
1975	< 0	0.01	< 0.01
1976	< 0	< 0.01	< 0.01
1977	< 0	< 0.01	< 0.01
1978	< 0	< 0.01	< 0.01
Significant Impact (17-2.100(171)(a),FAC	1.0	25.0	5.0
De minimis Impact 17-2.500(3)(e)1,FAC	NA	NA	13.0

TABLE 7-3

SUMMARY OF ACID MIST IMPACT ANALYSIS

FARMLAND INDUSTRIES, INC.
POLK COUNTY, FLORIDA

METEOROLOGICAL DATA	24-HR ACID MIST IMPACT (ug/m^3)	
	PLANTS 1, 2 & 5	PLANTS 3, 4 & 5
1974	0.40	5.1
1975	0.45	4.2
1976	0.47	4.6
1977	0.49	5.0
1978	0.52	4.2
AAL (1)	5.0	5.0

(1) AAL = TLV/210, 24-Hour Average

BEST AVAILABLE COPY

Z 127 633 225

Receipt for Certified Mail

UNITED STATES POSTAL SERVICE

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to: Charles Jenkins
Street and No.: Fairland Hydro
P.O., State and ZIP Code: Bartow, Fl

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	12-21-95

AC53-185490
PSD-FL-143A

PS Form **3800**, March 1993

Is your RETURN ADDRESS completed on the reverse side?

receive the
an extra

- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Charles Jenkins, E.C.
Fairland Hydro, LP
P O BOX 906
Bartow, Fl 33830

4a. Article Number
Z 127 633 225

4b. Service Type
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12/27/95

5. Signature (Addressee)
Linda Thompson

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

AFFIDAVIT OF PUBLICATION

THE LEDGER
Lakeland, Polk County, Florida

Case No .....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Robert Lee, who on oath says that he is Classified Manager of The Ledger, a daily newspaper published in Polk County, Florida; that the attached copy of advertisement, being a

..... Notice of Intent .....

in the matter of .....

AC 53-185490 .....

in the .....

Court, was published in said newspaper in the issues of .....

October 20; .....

1995 .....

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed ..... Classified Advertising Manager

by Robert E. Lee who is personally known to me

Sworn to and subscribed before me this ..... 20th .....

day of ..... October ..... A.D. 19 ..... 95 .....

(Seal) ..... Notary Public
BARBARA THIGPEN

My Commission Expires .....

Order # 552382

NOTARY PUBLIC STATE OF FLORIDA
OFFICIAL NOTARY SEAL
BARBARA THIGPEN
COMMISSION NUMBER
CC427638
MY COMMISSION EXP.
DEC. 19,1998

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT AMENDMENT
AC53-185490/PSD-FL-143A

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit amendment to Farmland Hydro, L.P., Post Office Box 906, Bartow, Florida, 33830. The Department intends to reduce the required frequency of NO_X emission testing at sulfuric acid plant No. 5 located at the company's phosphate fertilizer complex on C.R. 640 West near Bartow, Florida. There will be no change in emissions as a result of this amendent since NO_X emissions are low, not subject to rule, and not affected by testing frequency.

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 (F.S.). 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 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, F.S.

The Petition shall contain the following information; (a) The name, address, and the 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 warrants 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/request 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, Florida Administrative Code.

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

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District
8407 Laurel Fair Circle
Tampa, Florida 33619

Any person may send written comments on the proposed action to Administrator, New Source Review Section at the Department's Tallahassee address. All comments received within 30 days of the publication of this notice will be considered in the Department's final determination.
F406 - 10-20; 1995

F 406

Z 127 632 536

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to	Charles Jenkins
Street and No.	Fairland Hydro
P.O., State and ZIP Code	Bartow FL
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	10-11-95

No. 5 SAD
AC53-185490/
PSD-FI-143A

PS Form 3800, March 1993

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Charles Jenkins, EC
Fairland Hydro, LP
PO Box 906
Bartow, FL 33830

4a. Article Number
Z 127 632 536

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
10/16/95

5. Signature (Addressee)
Linda Thompson

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

BEST AVAILABLE COPY

P 256 396 245

RECEIPT FOR CERTIFIED MAIL

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

Sent to C.M. Farris	
Street and No. Farmland Ind.	
P.O., State and ZIP Code Bartow, Fl	
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 3-14-91	

PSD-F1-143A

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

● **SENDER:** Complete items 1 and 2 when additional services are desired, and comple 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent from being returned to you. The return receipt fee will provide you the name of the person delivere the date of delivery. For additional fees the following services are available. Consult postmaster 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, Gen. Mgr.
Farmland Ind.
P.O. BOX 960
Bartow, Fl 33603

4. Article Number
P 256 396 245

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD.
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X Linda Thompson

6. Signature — Agent
X

7. Date of Delivery
3/19/91

8. Addressee's Address *(ONLY if requested and fee paid)*
BL

PS Form 3811, Apr. 1989 ★U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

KA 123-90-02

February 14, 1991

Mr. C. H. Fancy
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Farmland Industries, Inc.
No. 5 Sulfuric Acid Plant
Request for Permit Amendment
Permit No. AC53-185490, PSD-FL-143A

Dear Mr. Fancy:

As discussed with Mr. John Reynolds of your staff on February 12, 1991, on behalf of Farmland Industries, Inc., two amendments to the above-referenced permit are hereby requested.

1. Specific Condition No. 5

To clarify the basis of the NOx emission limit, the following change is requested:

FROM: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

TO: Nitrogen oxides emissions shall not exceed:
0.12 lb/ton of 100% sulfuric acid produced
11.9 lbs/hr
52.2 tons/year

The above NOx emission limits are based on a general emission factor. If a higher emission factor results from compliance testing, the NOx emission limits may be revised after FDER review.

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609

Mr. C.H. Fancy
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

P 407 853 146

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to C. M. Farris	
Street and No. Farmland. Ind.	
P.O., State and ZIP Code Bartow, Fl	
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 2-4-91	

AC 53-185490
PSD-FI-143A

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

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, Gen. Mgr.
Farmland Industries
P.O. Box 960
Bartow, Fl 33830

4. Article Number
P 407 853 146

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X Linda Thompson

6. Signature — Agent
X

7. Date of Delivery
2-7-91

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

AFFIDAVIT OF PUBLICATION

THE LEDGER

Lakeland, Polk County, Florida

Case No ....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Stephen DeWitt, who on oath says that he is Controller of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a ....

Notice of Intent

in the matter of ....

5 Plant

in the ....

Court, was published in said newspaper in the issues of
November 29;

1990

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed [signature]
Controller

Sworn to and subscribed before me this 29th
day of November A.D. 19 1990

(Seal) NOTARY PUBLIC STATE OF FLORIDA

[signature: Barbara ...]
Notary Public

Notary Public, State of Florida
My Commission Expires My Commission Expires Nov. 11, 1994
Bonded Thru Troy Fain • Insurance Inc.

account # 10643
Farmland Ind

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., State Road 640 West, Bartow, Florida, to increase production rate of the No. 5 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 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. 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 Fule 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. Barry Andrews 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.
R-720 — 11-29; 1990

R 720

Farmland

Farmland Industries, Inc.
Fertilizer Phosphate Manufacturing
County Road 640
Post Office Box 960
Bartow, Florida 33830-0960
Telephone: 813 533-1141
Facsimile: 813 533-8793

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

December 3, 1990

Dear Mr. Fancy,

Pursuant to Section 403.815, Florida Statutes and DER Rule 17-103.150 Florida Administrative Code, the Notice of Intent to Issue has been published in a local newspaper. This newspaper is generally circulated in the county in which the project is located. A certified copy of the publication is attached.

If you have any questions pleas give me a call.

Sincerely,

C. Gene Meier

C. Gene Meier
Administrator
Environmental Services

CGM:dr/cgm6090

cc: C. M. Farris
E. H. Ferking, Jr.
J. Reynolds
B. Thomas
J. Harper, EPA

Farmland Fertilizer/Ag Chemical

CERTIFIED
P 271 140 288
MAIL

BARTOW DEC 3 '90 FLA

U.S POSTAGE 2.00 METER 0112534

Farmland Industries, Inc.
Fertilizer Phosphate Manufacturing
County Road 640
Post Office Box 960
Bartow, Florida 33830-0960

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
FDER
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

P 256 396 136

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. C. M. Farris, Farmland Inc	
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: 11-16-90 Permit: AC 53-185490 PSD-FL-154A	

PS Form 3800, June 1985 ★U.S.G.P.O. 1989-234-555

● **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 256 396 136 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X Linda Thompson	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 11/19/90	

PS Form 3811, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

OCT 19 1990

4APT-AEB

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Farmland Industries, Inc. (PSD-FL-143A)

Dear Mr. Fancy:

This is to acknowledge receipt of an application dated August 20, 1990, for a modification to Farmland Industries' previously issued Prevention of Significant Deterioration (PSD) permit.

We have reviewed the application as requested and have no substantive comments at this time.

Thank you for the opportunity to review this package. If you have any questions or comments, please contact Mr. Gregg Worley of my Staff at (404) 347-2904.

Sincerely yours,

Sally S. Turner, for
Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

cc: J. Reynolds
C. Halladay
B. Andrews
B. Thomas, SW Dist

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

AIR-4

U.S. OFFICIAL MAIL
ATLANTA OCT 29 '90 GA.
PENALTY FOR PRIVATE USE $300
R. METER 6091093
U.S. POSTAGE
0.25

Mr. Clair Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

→ P 4/21

Check Sheet

Company Name: Farm Land Industries
Permit Number: AC 53-185490
PSD Number: PSD-FL-143A
County: Polk
Permit Engineer: COSTELLO, LINERO
Others involved:

Application:
- [x] Initial Application
- [x] Incompleteness Letters
- [ ] Responses
- [ ] Final Application (if applicable)
- [ ] Waiver of Department Action
- [ ] Department Response
- [ ] Other

Intent:
- [x] Intent to Issue
- [x] Notice to Public
- [x] Technical Evaluation
- [x] BACT Determination
- [x] Unsigned Permit
- [ ] Correspondence with:
  - [x] EPA
  - [ ] Park Services
  - [ ] County
  - [ ] Other
- [x] Proof of Publication
- [ ] Petitions - (Related to extensions, hearings, etc.)
- [ ] Other

Final Determination:
- [x] Final Determination
- [x] Signed Permit
- [x] BACT Determination
- [ ] Other

Post Permit Correspondence:
- [ ] Extensions
- [x] Amendments/Modifications
- [x] Response from EPA
- [ ] Response from County
- [ ] Response from Park Services
- [ ] Other