

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

November 20, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Kenneth V. Ford
Manager, Environmental Affairs
Seminole Fertilizer Corporation
P. O. Box 471
Bartow, Florida 33830

Dear Mr. Ford:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for the modifications to sulfuric acid plants Nos. 4, 5, and 6 at your phosphate fertilizer plant located on Highway 60 West, Bartow, Polk County, Florida.

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

Sincerely,

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

CHF/WH/plm

Attachments

cc: Bill Thomas, SWD
Jewell Harper, EPA
John Koogler, P.E.
Brian Mitchell, NPS
Linda Novak, Polk Co.

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 Fee will provide you the signature of the person delivered to and the date of delivery.

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:
Mr. Kenneth V. Ford
Manager, Environmental Affairs
Seminole Fertilizer Corp.
P. O. Box 471
Bartow, FL 33830

4a. Article Number
P 062 922-010

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

7. Date of Delivery
NOV 23 1992

5. Signature (Addressee)

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

6. Signature (Agent)

PS Form 3811, November 1990 *U.S. GPO: 1991-287-066

DOMESTIC RETURN RECEIPT

P 062 922 010

**Receipt for
Certified Mail**

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

Sent to	
Mr. Kenneth V. Ford, Seminole	
Street and No.	
P. O. Box 471 Fertilizer	
P.O., State and ZIP Code	
Bartow, FL 33830	
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

Mailed: 11-20-92

Permit: AC 53-216288

PS Form 3800, June 1991

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of an
Application for Permits by:

DER File No. AC 53-216288
PSD-FL-191

Mr. Kenneth V. Ford
Manager, Environmental Affairs
Seminole Fertilizer Corporation
P. O. Box 471
Bartow, Florida 33830

INTENT TO ISSUE

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

The applicant, Seminole Fertilizer Corporation, applied on July 16, 1992, to the Department of Environmental Regulation for a permit to modify the Nos. 4, 5, and 6 sulfuric acid plants at Seminole Fertilizer Corporation's phosphate fertilizer manufacturing plant on Highway 60 West, Bartow, Polk County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and 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 Permits. 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 permits.

The Department will issue the permits 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 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, Florida Statutes.

The Petition shall contain the following information;

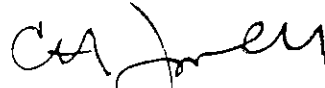
- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) 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 intent. 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 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 hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

11-20-92
Date

Copies furnished to:

Bill Thomas, SWD
Jewell Harper, EPA
John Koogler, P.E.
Brian Mitchell, NPS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMITS

The Department of Environmental Regulation gives notice of its intent to issue a construction permit (AC53-216288/PSD-FL-191) to Seminole Fertilizer Corporation, P. O. Box 471, Bartow, Florida 33830. The permit will allow the applicant to modify (increase production) of the existing Nos. 4, 5, and 6 sulfuric acid plants at Seminole Fertilizer Corporation's phosphate fertilizer manufacturing plant on Highway 60 West, Bartow, Polk County, Florida 33830. The modification to the sulfuric acid plants requires a Best Available Control Technology (BACT) determination for sulfur dioxide and acid mist. The proposed project is subject to Prevention of Significant Deterioration (PSD) regulations. The allowable emissions from each sulfuric acid plant will be 4.0 pounds of sulfur dioxide per ton of acid produced (380 lbs/hr and 1664.4 TPY), and 0.15 pounds of acid mist per ton of acid produced (14.25 lbs/hr and 62.4 TPY). Modeling results show that increases in ground-level concentrations are less than PSD significant impact levels for the applicable pollutants. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. 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 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 normal 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
3804 Coconut Palm Drive
Tampa, Florida 33619-8218

Any person may send written comments on the proposed action to Mr. Preston Lewis 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.

Further, 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

Seminole Fertilizer Corporation
Bartow, Polk County, Florida

Sulfuric Acid Plants Nos. 4, 5, and 6 Modification
File No.: AC53-216288 (PSD-FL-191)

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

November 20, 1992

I. General Information

A. Applicant

Seminole Fertilizer Corporation
P. O. Box 471
Bartow, Florida 33830

B. Request

On July 16, 1992, Seminole Fertilizer Corporation submitted an application for a permit to construct (modify) their existing Nos. 4, 5, and 6 sulfuric acid plants (SIC 2819). The application was considered complete on October 23, 1992, when the Department received Koogler & Associates' letter providing the remainder of the additional information on the project requested by the Department. All of these sources are located at the applicant's phosphate fertilizer manufacturing plant on Highway 60 West, Bartow, Polk County, Florida 33830. The UTM coordinates for this facility are Zone 17, 409.8 km E and 3087.0 km N.

C. Project

The applicant proposes to increase the production of the Nos. 4, 5, and 6 sulfuric acid plants from 80 to 95 TPH each (6840 TPD total). The basic sulfuric acid process is not being changed. No additional air pollution control equipment will be installed on the plants. No alterations to the plant are needed to operate at the higher production rates.

D. Emissions

Each sulfuric acid plant will increase its allowable production from 1920 to 2280 TPD of 100% acid. The following table summarizes the changes in emissions from sulfuric acid plants Nos. 4, 5, and 6, respectively.

Sulfuric Acid Plant No. 4								
	Production (TPD)	Sulfur Dioxide			Acid Mist			NO _x
		lbs			lbs			TPY
		Ton Acid	lbs/hr	TPY	Ton Acid	lbs/hr	TPY	
Proposed	2280	4.0	380	1664.4	0.15	14.25	62.4	49.9
Present	1920	3.39*	282	1142.1	0.052*	4.30	17.4	38.9
Increase	360	0.61	98	522.3	0.098	9.95	45.0	11.0

* Actual

Sulfuric Acid Plant No. 5								
	Production (TPD)	Sulfur Dioxide			Acid Mist			NO _x
		lbs			lbs			TPY
		Ton Acid	lbs/hr	TPY	Ton Acid	lbs/hr	TPY	
Proposed	2280	4.0	380	1664.4	0.15	14.25	62.4	49.9
Present	1920	3.35*	287	1240.6	0.069*	5.92	25.6	42.5
Increase	360	0.65	93	423.8	0.081	8.33	36.8	7.4

* Actual

Sulfuric Acid Plant No. 6								
	Production (TPD)	Sulfur Dioxide			Acid Mist			NO _x
		lbs			lbs			TPY
		Ton Acid	lbs/hr	TPY	Ton Acid	lbs/hr	TPY	
Proposed	2280	4.0	380	1664.4	0.15	14.25	62.4	49.9
Present	1920	3.32	288	1208.2	0.107	9.3	39.0	41.6
Increase	360	0.68	92	456.2	0.043	4.95	23.4	8.3

* Actual

From the previous tables, it can be seen that the increase in emissions resulting for this project are: 1402.3 TPY SO₂; 105.2 TPY acid mist; and 26.7 TPY NO_x. The increase in emissions of sulfur dioxide and acid mist exceed the significant emission rates listed in Table 212.400-2 of F.A.C. Rule 17-212.

II. Rule Applicability

The proposed project, modification of three sulfuric acid plants at a phosphate fertilizer plant, is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 17-210, 212, 272, 275, 296, and 297, Florida Administrative Code (F.A.C.).

The sources are in Polk County, an area designated attainment for all criteria pollutants (F.A.C. Rule 17-275.400).

The facility (SIC 2874) is a major source of particulate matter, sulfur dioxide, and fluorides because the potential emission of each of these pollutants exceeds 100 TPY. Chemical process plants are listed in Table 212.400-1, Major Facility Categories.

The proposed project is subject to the Prevention of Significant Deterioration Regulations, F.A.C. Rule 17-212.400, because the contemporaneous emissions increases of sulfur dioxide and acid mist from the sulfuric acid plants exceed the significant emission rates listed in Table 212.400-2 of F.A.C. Rule 17-212. The emission limits for these pollutants for the sulfuric acid plants will be established by a Best Available Control Technology (BACT) determination pursuant to F.A.C. Rule 17-212.410. The applicant is also subject to the other preconstruction review requirements listed in F.A.C. Rule 17-212.400.

In addition, the proposed modifications are subject to 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants, and F.A.C. Rule 17-296.411, Sulfur Storage and Handling Facilities.

III. Technical Evaluation

The emission limits proposed as BACT for the sulfuric acid plants and accepted by the Department are equivalent to the new source performance standards listed in 40 CFR 60, Subpart H. The attached BACT determination gives more information on the proposed emission standards.

IV. Air Quality Analysis

a. Introduction

The production rate increases due to the proposed project will result in emissions increases which are projected to be greater than the PSD significant rates for SO₂ and sulfuric acid mist. Therefore, the project is subject to the PSD review requirements contained in F.A.C. Rule 17-212.400. Part of these requirements is an air quality impact analysis for these pollutants, which includes:

- o An analysis of existing air quality.
- o A PSD increment analysis for SO₂.
- o An Ambient Air Quality Standards (AAQS) analysis.
- o An analysis of impacts on soils, vegetation, visibility, and growth-related air quality impacts.
- o A Good Engineering Practice (GEP) stack height determination

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses are based on air quality dispersion modeling completed in accordance with EPA guidelines. Based on these required analyses, the Department has reasonable assurance that the projected production rate increases, as described in this report and subject to the

conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or AAQS. A brief description of the modeling method used and results of the required analyses follow. A more complete description is contained in the permit application on file.

b. Analysis of the Existing Air Quality

Preconstruction ambient air quality monitoring may be required for pollutants subject to PSD review. However, an exemption to the monitoring requirement can be obtained if the maximum air quality impact resulting from the projected emissions increase, as determined through air quality modeling, is less than a pollutant-specific de minimus concentration. The predicted maximum concentration increase for SO_2 is given below:

PSD de minimus concentration ($\mu\text{g}/\text{m}^3$)	13
Averaging Time	24-hr
Maximum Predicted Impact ($\mu\text{g}/\text{m}^3$)	4.9

There are no monitoring de minimus concentrations for H_2SO_4 mist. As shown above, the predicted impact is less than the corresponding de minimus concentration; therefore, no preconstruction monitoring is necessary for either pollutant subject to PSD review.

c. Modeling Method

The EPA-approved Industrial Source Complex Short-Term (ISCST2) dispersion model was used by the applicant to predict the impact of the proposed project on the surrounding ambient air. All recommended EPA default options were used. Downwash parameters were used because the stacks were less than the good engineering practice (GEP) stack height. Five years of sequential hourly surface and mixing depth data from the Tampa, Florida National Weather Service collected during 1985 through 1989 were used in this model. Since five years of data were used, the highest-second high short-term predicted concentrations were compared with the appropriate ambient air quality standards or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards while the highest short-term impacts were used for comparison with the PSD significant impact levels.

d. Modeling Results

The applicant first evaluated the potential increase in ambient ground-level concentrations associated with the project to determine if these predicted ambient concentration increases would

be greater than the specified PSD significant impact levels for SO_2 . Dispersion modeling was performed with receptors placed along the 36 standard radial directions (10 degrees apart) surrounding the proposed source at the following downwind distances: 1360, 1500, 1750, 2000, 2500, 3000, 4000, and 5000m. The receptor ring at 1360m corresponds to the nearest property boundary. The results of this modeling presented below show that the increases in ambient ground-level concentrations for all averaging times are less than the PSD significant impact levels for SO_2 . Therefore, further dispersion modeling for comparison with AAQS and PSD Class II increment consumption was not required.

<u>Avg. Time</u>	<u>Annual</u>	<u>3-hr</u>	<u>24-hr</u>
PSD Significance Level (ug/m^3)	1.0	25.0	5.0
Ambient Concentration Increase (ug/m^3)	0.29	23.0	4.9

The nearest PSD Class I area is the Chassahowitzka National Wilderness Area located 109 km northwest of the facility. The impact of the proposed project which includes shutting down sulfuric acid plant No. 3 on this Class I area was evaluated using ISCST2. ISCST2 modeling predicted impacts of zero or less on all of the Class I SO_2 increments.

Sulfuric acid mist is a non-criteria pollutant, which means that neither a national ambient air quality standard nor a PSD Significant Impact has been defined for this pollutant. However, the Department does have a draft Air Toxics Permitting Strategy which defines a no-threat level (NTL) of $2.4 \text{ ug}/\text{m}^3$, 24-hour average for sulfuric acid mist. The Department used the same modeling procedure described above to evaluate the maximum ground level concentration of sulfuric acid mist due to the project. The result was $0.17 \text{ ug}/\text{m}^3$. In addition, the added reduction in sulfuric acid emissions due to the shutting down of sulfuric acid plant No. 3 will further reduce this value, which is already well below the NTL.

e. Additional Impacts Analysis

The applicant did an air quality related values (AQRV) analysis for both the PSD Class II area near the plant and for the Chassahowitzka Class I area located 109 km to the northwest. The increased emissions from the project are not expected to impact the AQRVs of either area. The AQRV analysis includes impacts on vegetation, soils, wildlife and visibility. In addition, the proposed modification will not significantly change employment,

population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

V. Conclusion

Based on the information provided by Seminole Fertilizer Corporation, the Department has reasonable assurance that the proposed projects, 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 17-210, 212, 272, 275, 296, and 297 of the Florida Administrative Code.

[Handwritten signature]
#41755



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:

Seminole Fertilizer Corp.
Post Office Box 471
Bartow, Florida 33830

Permit Number: AC53-216288
PSD-FL-191

Expiration Date: Jan. 1, 1994

County: Polk

Latitude/Longitude: 27°54'22"N
81°54'59"W

Project: Sulfuric Acid Plants
Nos. 4, 5, and 6 - Production
Increases to 2280 TPD Per Plant
(6840 TPD total)

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 272, 275, 296 and 297 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:

For the modifications to the existing Nos. 4, 5, and 6 sulfuric acid plants that will increase each plant's production to 2280 TPD 100% sulfuric acid (6840 TPD total for the three plants). The modifications do not involve physical alteration to these plants. These sources are located at the permittee's phosphate fertilizer manufacturing facility on Hwy 60 West, Bartow, Polk County, Florida 33830. The UTM coordinates of this facility are Zone 17, 409.8 km E and 3087.0 km N.

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

Attachments are listed below:

1. Seminole's application received July 16, 1992.
2. Koogler & Associates' letter dated August 6, 1992.
3. DER's letter dated September 11, 1992.
4. Koogler & Associates' letters dated October 22, 1992.

PERMITTEE:
Seminole Fertilizer Corp.

Permit Number: AC53-216288
PSD-FL-191
Expiration Date: January 1, 1994

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.
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

PERMITTEE:
Seminole Fertilizer Corp.

Permit Number: AC53-216288
PSD-FL-191
Expiration Date: January 1, 1994

GENERAL CONDITIONS:

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.

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

PERMITTEE:
Seminole Fertilizer Corp.

Permit Number: AC53-216288
PSD-FL-191
Expiration Date: January 1, 1994

GENERAL CONDITIONS:

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 (NSPS)

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:
Seminole Fertilizer Corp.

Permit Number: AC53-216288
PSD-FL-191
Expiration Date: January 1, 1994

GENERAL CONDITIONS:

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 maximum production rate of each of the sulfuric acid plants (Nos. 4, 5, and 6) shall not exceed 2280 tons per day based on 100% H₂SO₄ (6840 TPD for three plants).

2. Sulfur dioxide emissions from each plant shall not exceed 4 lbs/ton of 100% sulfuric acid produced, 380.0 lbs/hr, and 1664.4 tons/yr.

3. Sulfuric acid mist emissions from each plant shall not exceed 0.15 lb/ton of 100% sulfuric acid produced, 14.3 lbs/hr, and 62.4 tons/yr.

4. Nitrogen oxides emissions from each plant shall not exceed 0.12 lb/ton of 100% sulfuric acid produced, 11.4 lbs/hr, and 49.9 tons/yr.

The nitrogen oxides limits are subject to revision if sufficient test data indicate that the emission factor is improper.

PERMITTEE:
Seminole Fertilizer Corp.

Permit Number: AC53-216288
PSD-FL-191
Expiration Date: January 1, 1994

SPECIFIC CONDITIONS:

5. Sulfuric Acid Plant No. 3 with its ammonia scrubber shall cease operation, be rendered inoperable, and its operation permit (AO53-176431) surrendered to the Department prior to the expiration of this construction permit.

6. Visible emissions from each plant shall not exceed 10% opacity.

7. A continuous emission monitor shall be used to monitor sulfur dioxide emissions from each plant in accordance with 40 CFR 60, Subpart H (July 1, 1992), Standards of Performance for Sulfuric Acid Plants. Initial and annual compliance tests shall be conducted using: EPA Method 7E for nitrogen oxides, EPA Method 8 for sulfur dioxide and acid mist, and EPA Method 9 for visible emissions as described in 40 CFR 60, Appendix A (July 1, 1992).

8. The compliance tests shall be conducted at 90 to 100% of the permitted capacity (2052 - 2280 TPD sulfuric acid production). The Department's Southwest District office shall be notified in writing 15 days prior to source testing. Written reports of the tests shall be submitted to that office within 45 days of test completion.

9. 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 of the permit (F.A.C. Rule 17-4.090).

10. An application for an operation permit must be submitted to the 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 sulfuric acid plants. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

Best Available Control Technology (BACT) Determination
Seminole Fertilizer Corporation
Polk County

The applicant proposes to increase sulfuric acid production to 2280 tons per day each for the Nos. 4, 5, and 6 sulfuric acid plants (6840 TPD total) that are located at the phosphate fertilizer manufacturing facility on Hwy. 60 West near Bartow, Polk County, Florida 33830.

The proposed project will result in a significant increase in emissions of sulfur dioxide (SO₂) and sulfuric acid mist. The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with F.A.C. Rule 17-212.400.

The BACT review is part of the PSD review requirements in accordance with F.A.C. Rule 17-212.400.

Date of Receipt of a BACT Application: July 16, 1992.

The BACT determination requested by the applicant is presented below:

Control Technology Double Absorption/Fiber Mist Eliminators

<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4 lb/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

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 17-212.410, Best Available Control Technology Determination, Stationary Source-Preconstruction Review, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, 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:

BACT-Seminole Fertilizer Corp.
AC53-216288 (PSD-FL-191)

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to 40 CFR 52.21, 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.

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

BACT Determined by DER:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4.0 lb/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

BACT Determination Rationale

DER's BACT determination is the same as that proposed by the applicant, determinations completed by other states, and Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process in itself is the control technology for SO₂. The emission limits reflect conversion efficiency of around 99.4% of SO₂ to H₂SO₄. High efficiency mist eliminators are considered BACT for sulfuric 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.

BACT-Seminole Fertilizer Corp.
AC53-216288 (PSD-FL-191)

Environmental Impact Analysis

The impact analysis for the BACT determination is based on 8,760 hours/year operation. Modeling results show that increases in ground-level concentrations are less than PSD significant impact levels for the applicable pollutants.

Conclusion

The incremental impact and the ambient air quality impact from SO₂ emissions due to the proposed modification is in compliance with all air pollution regulations. 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:

Preston Lewis, P.E.
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

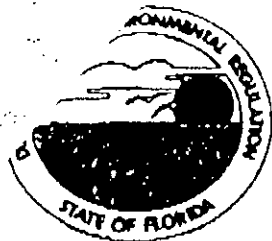
C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Carol M. Browner, Secretary
Dept. of Environmental Regulation

Date 1992

Date 1992

Attachments Available Upon Request



Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

Dr. Richard Garity, Deputy Assistant Secretary

PERMITTEE:

Seminole Fertilizer Corporation
P.O. Box 471
Bartow, FL 33830

PERMIT/CERTIFICATION

Permit No: AO53-176431

County: Polk

Expiration Date: 04/11/93

Project: Sulfuric Acid Plant #3

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 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 operation of Sulfuric Acid Plant #3, a Monsanto single absorption system with Brink Demistor. Emissions are controlled by an Ammsox Ammonia Scrubber which produces 20 TPD of ammonia sulfate as a by-product. This plant is rated at 46 TPH of 100% H_2SO_4 .

Location: One mile north of S.R. 60, between Bartow and Mulberry,
Polk County

UTM: 17-409.9 E 3086.8 N NEDS NO: 0046 Point ID: 08

Replaces Permit No.: AO53-83549

PERMITTEE:

Seminole Fertilizer Corporation
P.O. Box 471
Bartow, FL 33830

PERMIT/CERTIFICATION

Permit No: A053-176431
County: Polk
Expiration Date: 04/11/93
Project: Sulfuric Acid Plant #3

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.
2. Visible Emissions shall not exceed 10% opacity.
[Rule 17-2.600(2)(a)2.a., F.A.C.].
3. Sulfur Dioxide emissions shall not exceed the lesser of
 - A. 10 pounds per ton of 100% acid produced, or
 - B. 460 pounds per hour.[Rule 17-2.600(2)(a)2.b., F.A.C.].

During any time that Sulfuric Acid Plant #4, #5, or #6 exceeds a production rate of 70 tons per hour of 100% H_2SO_4 , the sulfur dioxide emissions from Sulfuric Acid Plant #3 shall not exceed the lesser of

- C. 7.4 pounds per ton of 100% acid produced, or
- D. 340 pounds per hour.

[Reference previous permit and 1985 correspondence].

4. Acid Mist emissions shall not exceed the lesser of
 - A. 0.3 pounds per ton of 100% acid produced, or
 - B. 13.8 pounds per hour.[Rule 17-2.600(2)(a)2.c., F.A.C.].
5. The maximum permitted production rate is 46 tons per hour of 100% H_2SO_4 .

6. Test the emissions for the following pollutant(s) within 30 days of startup, and annually thereafter, and submit a copy of the test data to the Air Section of the Southwest District Office of the Department within 45 days of such testing [Rule 17-2.700(2), F.A.C.]:

- (X) Opacity
- (X) Sulfur Dioxide
- (X) Acid Mist

7. Testing of emissions must be accomplished within $\pm 10\%$ of the permitted maximum production rate of 46 tons per hour of 100% H_2SO_4 . The actual production rate shall be specified in each test result. A compliance test submitted at a production rate less than 90% of the permitted maximum production rate will automatically constitute an amended permit at the lesser rate until another test showing compliance at a higher rate is submitted. Failure to submit the actual production rate and actual operating conditions may invalidate the test data and fail to provide reasonable assurance of compliance. [Rule 17-4.070(3), F.A.C.].