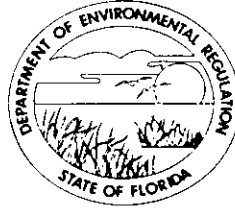


STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. T. R. Schmalz, Manager
Engineering & Environmental Services
Royster Company
Post Office Drawer 797
Mulberry, Florida 33860

July 12, 1985

Enclosed is Permit Number AC 53-085261 which authorizes the proposed modifications to Royster Company's sulfuric acid plant that is located near Mulberry, Polk County, Florida. This permit is being 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 32301; 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.

Sincerely,

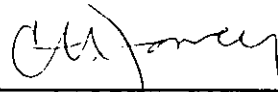
C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Enclosure

cc: James T. Wilburn, EPA, Region IV
Kathy Campbell, Bartow Public Library
Bill Thomas, DER Southwest District

CERTIFICATION

This is to certify that the foregoing Notice of Permit and all copies requested were mailed before the close of business on 15 July, 1985.



C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management
2600 Blair Stone Road
Tallahassee, Florida 32301

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.

Patricia H. Adams July 15, 1985
Clerk Date

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 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 service(s) requested.

- 1. Show to whom, date and address of delivery.
- 2. Restricted Delivery.

3. Article Addressed to:
Mr. T. R. Schmalz
Royster Company
P. O. Drawer 797
Mulberry, Florida 33860

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P16 7682436

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee

X

6. Signature - Agent

X *T. R. Schmalz*

7. Date of Delivery

7-17-85

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

DOMESTIC RETURN RECEIPT

P16 7682436

RECEIPT FOR CERTIFIED MAIL

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

SENT TO			
Mr. T. R. Schmalz			
STREET AND NO.			
P.O., STATE AND ZIP CODE			
POSTAGE	\$		
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	c	
	SPECIAL DELIVERY	c	
	RESTRICTED DELIVERY	c	
	OPTIONAL SERVICES	RETURN RECEIPT SERVICE	c
		SHOW TO WHOM AND DATE DELIVERED	c
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	c
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	c
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	c		
TOTAL POSTAGE AND FEES	\$		
POSTMARK OR DATE			
7/15/85			

PS Form 3800, Apr. 1976

Final Determination

Royster Company
Mulberry, Florida
Polk County

Sulfuric Acid Plant
Permit Number
AC 53-85261

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

July 2, 1985

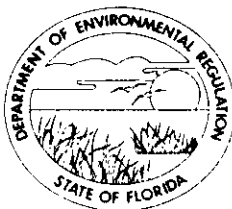
Final Determination

Royster Company's application for a permit to modify a sulfuric acid plant at their existing phosphate fertilizer facility near Mulberry, Polk County, Florida has been reviewed by the Bureau of Air Quality Management. Public Notice of the department's Intent to Issue the permit was published in The Ledger, Lakeland, Florida, on May 31, 1985.

No comments were received on the department's Intent to Issue the permit. The final action of the department will be to issue the permit as proposed in the May 21, 1985, Technical Evaluation and Preliminary Determination.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Royster Company
P. O. Drawer 797
Mulberry, Florida 33860

Permit Number: AC 53-85261
Expiration Date: April 1, 1986
County: Polk
Latitude/Longitude: 27° 53' 15"N/
82° 56' 50"W
Project: Sulfuric Acid Plant
Modifications

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

Modifications to an existing sulfuric acid plant to increase production from 1,400 to 1,700 TPD 100% H₂SO₄ and to cogenerate electrical power. Modifications include installing a waste heat boiler, steam superheater, economizers, boiler feedwater treatment equipment, a new electric motor drive for the air blower, a shell and tube heat exchanger for the acid, a new cooling tower to replace two existing ones, a turbo-generator, and additional catalyst in the converter.

The sulfuric acid plant is located in Polk County at Royster Company's existing phosphate fertilizer facility on State Road 60, about 1.5 miles east of Mulberry, Florida. The UTM coordinates of this site are 17, 406.8 km E and 3085.1 km N.

The modifications shall be in accordance with the applications for permit to construct that were signed by R. W. Heinz on March 29, 1984, and April 9, 1985, and the additional information supplied in Royster Company's letter dated May 9, 1984, and Sholtes & Koogler's letter dated April 3, 1985 except for any changes listed as Specific Conditions in this permit.

- Attachments:
1. Application (March 29, 1984)
 2. DER's letter dated May 2, 1984
 3. Royster Company's letter dated May 9, 1984
 4. DER's letter dated May 24, 1984
 5. Sholtes & Koogler's letter dated April 3, 1985
 6. Application (April 9, 1985)

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations 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. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute 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, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

GENERAL CONDITIONS:

6. The permittee shall at all times 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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring 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 notify and provide the department with the following information:

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

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

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 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 arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

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 17-4.12 and 17-30.30, 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 is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

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 monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

GENERAL CONDITIONS:

- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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 date(s) 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 submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The modified sulfuric acid plant shall comply with all requirements of 40 CFR 60.80, Subpart H - Standards of Performance for Sulfuric Acid Plants.
2. Sulfuric acid production, measured as 100 percent H_2SO_4 , shall not exceed 1,700 TPD.
3. Sulfur dioxide emissions shall not exceed 4.0 lb/ton acid and 6,800 lb/day.

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

SPECIFIC CONDITIONS:

4. Acid mist emissions shall not exceed 0.15 lb/ton acid and 255 lb/day.
5. Visible emissions shall not exceed 10 percent opacity, average for any consecutive 6 minute period.
6. The test methods and procedures described in 40 CFR 60.85 shall be used to determine the compliance status of the source with the sulfur dioxide and acid mist standards. Method 9, as described in 40 CFR 60, Appendix A, shall be used to determine the compliance status of the source with the visible emissions standard. Compliance tests shall be conducted while the plant is operating at its maximum permitted capacity ($\pm 10\%$).
7. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated on this plant as specified in 40 CFR 60.84. Excess emissions shall be reported to the Southwest District and the Bureau of Air Quality Management.
8. This plant shall not be operated more than 8,400 hours per year without prior approval of the Southwest District.
9. This construction permit replaces the current operation permit (AO 53-78016) for this sulfuric acid plant. While the plant is being modified, the emissions shall not exceed 8.64 lb SO₂ and 0.15 lb acid mist per ton of acid produced when the plant is being operated commercially.
10. Construction shall reasonably conform to the plan and schedule in the application. Any changes in the plan or schedule shall be reported to the Southwest District.
11. Royster Company shall take precautionary measures to prevent gas leaks and promptly repair any gas leaks that occur at this plant. A portable industrial vacuum unit equipped with classification and air filtering equipment shall be used to rejuvenate the existing catalyst. Spent catalyst shall be disposed of in an environmentally sound manner.
12. Royster Company shall submit a complete application for permit to operate the sulfuric acid plant, which must include an emissions test report, to the Southwest District at least 90 days prior to the expiration date of this construction permit. If the compliance tests are conducted at a plant operating rate of less than 90

PERMITTEE:
Royster Company

Permit Number: AC 53-85261
Expiration Date: April 1, 1986

SPECIFIC CONDITIONS:

percent of the permitted capacity (1,700 TPD), then any permit to operate issued for the plant shall restrict maximum production to not more than 10 percent above the production rate that existed during the compliance tests. Royster Company may continue to operate this sulfuric acid plant, if it is in compliance with all conditions of this construction permit, until its expiration date or until the expiration date of any permit to operate that is issued for this source.

13. Upon obtaining a permit to operate, Royster Company will be required to submit quarterly excess emissions reports (40 CFR 60.7) and annual operation reports which shall include, as a minimum, the annual production and a recent emissions test report, to the Southwest District. A copy of the excess emissions report shall be sent to the Bureau of Air Quality Management.

Issued this 2nd day of July, 1985

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION


VICTORIA J. TSCHINKEL, Secretary

Best Available Control Technology (BACT) Determination
Royster Company
Polk County

The applicant plans to increase the output capacity of an existing sulfuric acid plant located at their facility in Mulberry, Florida. The production of 100 percent sulfuric acid will be increased from 1400 to 1700 tons per day. The higher sulfuric acid plant throughput will result in the increase of sulfur dioxide and sulfuric acid mist air emissions by 386 and 31 tons per year respectively.

The increase of sulfur dioxide and sulfuric acid mist emission are greater than the significant emission rates listed in Table 500-2 Regulated Air Pollutants. The emission limits for these two air pollutants will be subject to a best available control technology determination as set forth in Florida Administrative Code Rule 17-2.630.

BACT Determination Requested by the Applicant:

Sulfur dioxide emissions will not exceed 4.0 pounds per ton of 100% sulfuric acid produced. The air emission control system will be double absorption with catalyst screening and make-up every 3-5 years.

Sulfuric acid mist emissions will not exceed 0.15 pounds per ton of 100% sulfuric acid produced. The air emission control system will be high efficiency mist eliminators.

Date of Receipt of a BACT Application:

April 4, 1985

Date of Publication in the Florida Administrative Weekly:

April 19, 1985

Review Group Members:

The determination was based upon comments received from the Stationary Source Control Section and the Southwest District.

BACT Determined by DER:

The emissions of sulfur dioxide and sulfuric acid mist, including visible emissions, shall not exceed the standards as contained in 40 CFR 60.80, Subpart H, of the new source performance standards (NSPS).

The test methods and procedures as set forth in Subsection 60.85 of NSPS Subpart H shall be used to determine compliance with the emission limits determined as BACT.

BACT Determination Rationale:

Sulfur dioxide emissions from a sulfuric acid plant are an inverse function of the sulfur conversion efficiency. This conversion is always incomplete, and is affected by the number of stages in the catalytic converter, the amount of catalyst used, temperature and pressure, and the concentrations of the reactants. The dual absorption scrubbing process is one of the two processes that will increase acid production without yielding unwanted byproducts.

Sulfuric acid mist is created when sulfur trioxide combines with water vapor at a temperature below the dew point of sulfur trioxide. Fiber mist eliminators effectively reduce the acid mist emissions.


New source performance standards (NSPS) for sulfuric acid plants, Subpart H, was promulgated in 1971, and addressed sulfur dioxide, acid mist, and visible emissions. EPA reviewed these standards in 1979 and did not recommend that the standards be made more stringent.

The department agrees that the NSPS, Subpart H, is BACT for the applicant's proposed increase in the production of sulfuric acid.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301


Recommended by:



C. H. Fancy, Deputy Bureau Chief

Date: 7/2/85

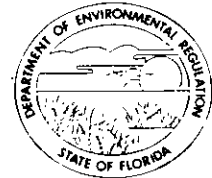
Approved by:



for Victoria J. Tschinkel, Secretary

Date: 2-7-85

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



Interoffice Memorandum

TO: Victoria J. Tschinkel
FROM: Clair Fancy *Clair Fancy*
DATE: July 2, 1985
SUBJ: Royster Company

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
FROM: _____	DATE: _____

DER
JUL 3 1985
BAQM

Office of the Secretary

Attached is the Final Determination and Permit to Construct No. AC 53-85261 which approves the sulfuric acid plant modifications at Royster Company's Mulberry, Polk County, Florida, facility. Public Notice of the department's intent to issue the permit was published in The Ledger of Lakeland, Florida, on May 31, 1985. No comments were received on the proposed permit.

The bureau recommends your approval and signature on the construction permit and best available control technology determination. Day 90, after the permit would be issued by default is August 2, 1985.

CHF/WH/s



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

① ~~Bluff~~ J.L.
② Pally
J. Le

JUN 18 1985

JUN 21 1985

REF: 4APT-AM

BAQM

Mr. C. H. Fancy, P.E.,
Deputy Chief
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

RE: PSD-FL-106 - Royster Company

This is to acknowledge receipt of your May 24, 1985, PSD preliminary determination for the sulfuric acid plant production increase at the above referenced facility in Mulberry, Florida. We have decided that this determination will not be subject to the Region IV Overview of State Programs policy.

Please submit a copy of the final determination and permits when they are issued.

Sincerely yours,

Richard A. Dubose /acting for

James T. Wilburn, Chief
Air Management Branch
Air, Pesticides, & Toxics Management
Division