

F 938 762 690

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Gary D. Greer, Royster	
Street and No. P.O. Drawer 797	
P.O., State and ZIP Code Mulberry, FL 33860	
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: 9-28-89 Permit: AC 53-163740	

PS Form 3800, June 1985



# 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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

Mr. Gary D. Greer  
Royster Company  
Post Office Drawer 797  
Mulberry, Florida 33860

September 27, 1989

Enclosed is construction permit No. AC 53-163740 for the molten sulfur storage and handling system at the Royster facility near Mulberry, 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.  
Bureau of Air Regulation

Copy furnished to:

B. Thomas, SW District  
T. Schmalz, P.E.

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 9/28/09.

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.

Keri J. Jones  
Clerk

9/28/09  
Date

Final Determination

Royster Company  
Mulberry, Polk County, Florida

Molten Sulfur Storage and Handling System

Permit Number: AC 53-163740

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

September 21, 1989

## Final Determination

Royster's application for a construction permit for the existing molten sulfur storage and handling system at Royster's facility near Mulberry, Polk County, Florida, has been reviewed by the Bureau of Air Regulation.

Public Notice of the Department's Intent to Issue the permit was published in The Ledger on August 24, 1989.

Copies of the Preliminary Determination have been available for public inspection at the Department's Southwest District office in Tampa, and the Department's Bureau of Air Regulation in Tallahassee.

No comments were received during the public notice period. However, due to the Bureau's name change, the necessary changes will be made in the permit.

The reference to Frasch sulfur in the permit is not valid and so specific condition No. 8 will be corrected.

The final action of the Department will be to issue the permit as proposed in the Preliminary Determination with the above mentioned changes.



## 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:**

Royster Company  
Post Office Drawer 797  
Mulberry, FL 33860

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990  
County: Polk  
Latitude/Longitude: 27°53'16"N  
81°56'54"W

Project: Molten Sulfur Storage  
and Handling System

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 permitting of the existing molten sulfur storage and handling system consisting of a 1000 ton storage tank, railcar and truck unloading dump pits, and the associated transfer pumps and piping. The molten sulfur system is located at the Royster facility near Mulberry, Polk County, Florida.

The UTM coordinates of this facility are Zone 17, 406.7 km East and 3085.2 km North.

The source shall be permitted 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. Royster's application received April 19, 1989.
2. DER's letter dated May 17, 1989.
3. Royster's response received June 19, 1989.
4. DER's Preliminary Determination dated August 15, 1989.
5. DER's Final Determination dated September 21, 1989.

**PERMITTEE:**  
Royster Company

**Permit Number:** AC 53-163740  
**Expiration Date:** April 1, 1990

**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 therefor 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 53-163740  
Expiration Date: April 1, 1990

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 non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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



PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

**GENERAL CONDITIONS:**

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. 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.
- 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.

**PERMITTEE:**  
Royster Company

**Permit Number:** AC 53-163740  
**Expiration Date:** April 1, 1990

**GENERAL CONDITIONS:**

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.

14. 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 molten sulfur storage and handling system shall be allowed to operate continuously (i.e. 8760 hours/year).
2. The maximum sulfur throughput rate shall neither exceed 525 tons per day (TPD), nor 190,000 tons per year (TPY).
3. Visible emissions shall not exceed 20% opacity from any source in the molten sulfur system.
4. The permittee shall employ procedures to minimize emissions from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a) [Molten Sulfur Storage and Handling Facilities]. The permittee shall also comply with other applicable provisions of F.A.C. Rules 17-2 and 17-4.
5. No objectionable odors shall be allowed, in accordance with F.A.C. Rule 17-2.620(2) [Objectionable Odor Prohibited].

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

SPECIFIC CONDITIONS:

6. Initial and annual compliance tests shall be conducted in accordance with the July 1, 1988 version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions.

7. Any change in the method of operation, equipment or operating hours shall be submitted to DER's Southwest District office for approval.

8. For emission inventory and PSD purposes, the estimated emissions from the sulfur storage tank are:

Pollutant	Emissions	
	lbs/hr	TPY
PM/PM <sub>10</sub>	0.19	0.81
SO <sub>2</sub>	0.27	1.17
H <sub>2</sub> S	0.06	0.28
TRS	0.18	0.79

The total emissions of sulfur particulate from the two pits are estimated to be 148 lbs/yr. The emissions of other pollutants from the pits are negligible. The permittee stated that no hydrocarbon emissions are expected from the facility because the sulfur received at the facility is bright sulfur. The basis used for calculating emissions is the maximum permitted sulfur throughput rate.

9. A minimum of 15 days prior written notification of the compliance tests shall be given to DER's Southwest District office. The compliance test results shall be submitted to the district 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 of the permit (F.A.C. 17-4.090).

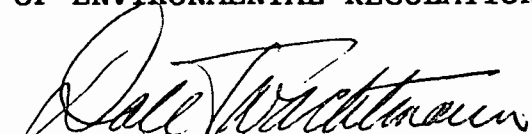
11. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant 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. 17-4.220).

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

Issued this 22 day  
of September, 1989

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
Dale Twachtmann, Secretary

ATTACHMENTS AVAILABLE UPON REQUEST



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

RECEIVED  
SEP 22 1989

# Interoffice Memorandum

Office of the Secretary

TO: Dale Twachtmann  
FROM: Steve Smallwood *by LAY*  
DATE: September 21, 1989  
SUBJ: Approval of Construction Permit No. AC 53-163740  
Royster Company

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for Royster's existing molten sulfur storage and handling system at Royster's facility near Mulberry, Polk County, Florida.

No comments were received in response to the Public Notice of the Department's Intent to Issue the permit.

Day 90, after which the permit will be issued by default, is October 24, 1989.

I recommend your approval and signature.

attachment

SS/pr

*Please call  
Patty Adams  
when signed  
8-1344*



## 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:**

Royster Company  
Post Office Drawer 797  
Mulberry, FL 33860

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990  
County: Polk  
Latitude/Longitude: 27°53'16"N  
81°56'54"W  
Project: Molten Sulfur Storage  
and Handling System

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 permitting of the existing molten sulfur storage and handling system consisting of a 1000 ton storage tank, a railcar and a truck unloading dump pits, and the associated transfer pumps and piping. The molten sulfur system is located at the Royster facility near Mulberry, Polk County, Florida.

The UTM coordinates of this facility are Zone 17, 406.7 km East and 3085.2 km North.

The source shall be 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. Royster's application received April 19, 1989.
2. DER's letter dated May 17, 1989.
3. Royster's response received June 19, 1989.
4. DER's Preliminary Determination dated August 15, 1989.

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

**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 therefor 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 53-163740  
Expiration Date: April 1, 1990

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 non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

**GENERAL CONDITIONS:**

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. 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.
- 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.

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

**GENERAL CONDITIONS:**

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.

14. 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 molten sulfur storage and handling system shall be allowed to operate continuously (i.e. 8760 hours/year).
2. The maximum sulfur throughput rate shall neither exceed 525 tons per day (TPD), nor 190,000 tons per year (TPY).
3. Visible emissions shall not exceed 20% opacity from any source in the molten sulfur system.
4. The permittee shall employ procedures to minimize emissions, from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-2.600(11)(a) [Molten Sulfur Storage and Handling Facilities]. The permittee shall also comply with other applicable provisions of F.A.C. Rules 17-2 and 17-4.
5. No objectionable odors shall be allowed, in accordance with F.A.C. Rule 17-2.620(2) [Objectionable Odor Prohibited].

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

SPECIFIC CONDITIONS:

6. Initial and annual compliance tests shall be conducted in accordance with the July 1, 1988 version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions.

7. Any change in the method of operation, equipment or operating hours shall be submitted to DER's Southwest District office for approval.

8. For emission inventory and PSD purposes, the estimated emissions from the sulfur storage tank are:

Pollutant	Emissions	
	lbs/hr	TPY
PM/PM <sub>10</sub>	0.19	0.81
SO <sub>2</sub>	0.27	1.17
H <sub>2</sub> S	0.06	0.28
TRS	0.18	0.79

The total emissions of sulfur particulate from the two pits are estimated to be 148 lbs/yr. The emissions of other pollutants from the pits are negligible. The permittee stated that no hydrocarbon emissions are expected from the facility because the sulfur received at the facility is bright (Frasch) sulfur. The basis used for calculating emissions is the maximum permitted sulfur throughput rate.

9. A minimum of 15 days prior written notification of the compliance tests shall be given to DER's Southwest District office. The compliance test results shall be submitted to the district 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 BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).

11. 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. 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. 17-4.220).

PERMITTEE:  
Royster Company

Permit Number: AC 53-163740  
Expiration Date: April 1, 1990

Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1989

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

---

Dale Twachtmann, Secretary

ATTACHMENTS AVAILABLE UPON REQUEST



# 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

August 15, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Gary D. Greer  
Royster Company  
Post Office Drawer 797  
Mulberry, Florida 33860

Dear Mr. Greer:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Royster's molten sulfur storage and handling system at the Royster facility near Mulberry, Polk County, Florida.

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

Sincerely,

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

CHF/pr

Attachments

cc: B. Thomas, SW District  
T. Schmalz, PE, Royster

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Royster Company  
Post Office Drawer 797  
Mulberry, FL 33860

DER File No. AC 53-163740

---

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, Royster Company, applied on April 19, 1989, to the Department of Environmental Regulation for a construction permit for the existing molten sulfur storage and handling system located at Royster's facility near Mulberry, 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 applicant 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.  
Deputy Chief  
Bureau of Air Quality  
Management

Copies furnished to:

B. Thomas SW District  
T. Schmalz, PE, Royster



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 Royster Company, Post Office Drawer 797, Mulberry, FL 33860, for the existing molten sulfur storage and handling system located at Royster's facility near Mulberry, Polk County, Florida. A determination of the Best Available Control Technology (BACT) was not required. 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 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 Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

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

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation  
and  
Preliminary Determination

Royster Company  
Mulberry, Polk County, Florida

Molten Sulfur Storage and Handling System

Permit Number: AC 53-163740

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

August 15, 1989

## I. Application

### A. Applicant

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

### B. Project and Location

The applicant proposes to permit the existing molten sulfur storage and handling system at Royster's phosphate processing facility in Mulberry, Polk County, Florida.

The UTM coordinates of this facility are Zone 17, 406.7 km East and 3085.2 km North.

### C. Facility Category

Royster's facility is major in accordance with Rule 17-2.100 of the Florida Administrative Code (F.A.C.). The molten sulfur storage and handling system consists of several existing minor sources within the facility. The Standard Industrial Classification (SIC) Code is Industry No. 2819, Sulfuric Acid/Phosphate Processing.

The NEDs Source Classification Code (SCC) is 3-01-070-02, Storage and Transfer, Industrial Inorganic Chemicals Production.

## II. Project Description

Royster's molten sulfur storage and handling system consists of a 1000 ton storage tank, one railcar unloading dump pit, one truck unloading dump pit, and the associated transfer pumps and piping. All the molten sulfur received is used in the manufacture of sulfuric acid.

The molten sulfur is delivered by 22-ton tank trucks and 100-ton railcars. Sulfur from tank trucks is gravity fed into a below grade covered pit. It is then transferred by submerged pumps to an insulated storage tank fitted with a steam coil. Since railcar sulfur is generally solidified, it has to be heated before it can be gravity fed to a below grade covered pit. This pit is also connected to the storage tank. Sulfur from the tank is continuously fed to the sulfuric acid plant at the rate of about 525 tons per day, 190,000 tons per year (TPY).

The sulfur storage tank is 31 ft in diameter with 24 ft sidewalls and has four 180° steam jacketed steel elbow vents. One vent is in the center while the other three are peripheral (120° apart). The tank truck pit is 10 ft x 20 ft x 6 ft deep, while the railcar pit is 15 ft x 60 ft x 8 ft deep.

Emissions of sulfur particulate matter (PM) and particulates less than 10 microns in size (PM<sub>10</sub>) from the tank and pits are expected to be less than 1 ton per year (TPY). Negligible amounts of sulfur dioxide (SO<sub>2</sub>), hydrogen sulfide (H<sub>2</sub>S), and reduced sulfur compounds (TRS) will also be emitted.

### III. Rule Applicability

The existing Royster facility is major in accordance with F.A.C. Rule 17-2.100. The molten sulfur storage and handling system will emit particulate matter and will be permitted in accordance with F.A.C. Rules 17-2 and 17-4; and, Chapter 403 of the Florida Statutes.

The facility is located in Polk County, an area designated as attainment for all criteria pollutants, in accordance with F.A.C. Rule 17-2.420.

The project is not subject to the new source review requirements of F.A.C. Rule 17-2.500(5), Prevention of Significant Deterioration-Preconstruction Review Requirements, because the projected emissions do not exceed significance levels in Table 500-2.

The project is subject to F.A.C. Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Requirements.

The project is subject to F.A.C. Rule 17-2.600(11), Specific Emission Limiting and Performance Standards for Sulfur Storage and Handling Facilities, which lists specific operational emission reduction procedures that are to be followed. Visible emissions (VE) are limited to 20% opacity. The sources are not subject to a weight emission limiting standard, in accordance with F.A.C. Rule 17-2.600(11)(e), since the sulfur particulate emissions from each individual source are less than 1 ton per year.

The project is subject to F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards, which prohibits objectionable odors.

The project is subject to compliance testing and reporting requirements in accordance with F.A.C. Rule 17-2.700. Compliance testing for the sources shall be conducted using EPA Method 9 for visible emissions in accordance with F.A.C. Rule 17-2.700(6)(b)9.

### IV. Source Impact Analysis

#### A. Emission Limitations

The maximum emissions from the sulfur storage tank are estimated to be as follows, based on test results from similar sources:



Pollutant	Emissions	
	lbs/hr	TPY
PM/PM <sub>10</sub>	0.19	0.81
SO <sub>2</sub>	0.27	1.17
H <sub>2</sub> S	0.06	0.28
TRS	0.18	0.79

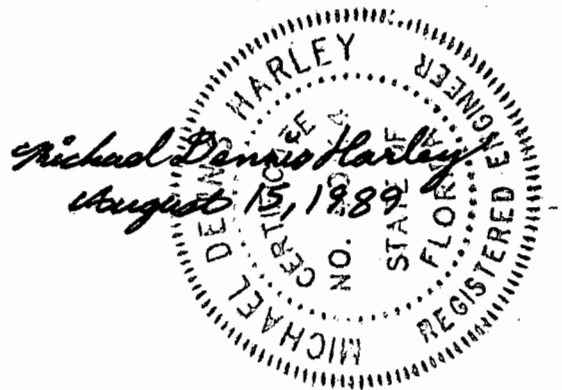
Sulfur particulate emissions from the pits are estimated to be 148 lbs/yr. The emissions of other pollutants from the pits are negligible. The applicant stated that no hydrocarbon emissions are expected from the facility because the sulfur received at the facility is bright (Frasch) sulfur.

#### B. Air Quality Impacts

The technical evaluation of this project determined that ambient air monitoring or modeling would not be required to provide reasonable assurance that Florida's air quality standards would not be violated.

#### V. Conclusion

Based on the information provided by Royster, the Department has reasonable assurance that the existing molten sulfur storage and handling system, 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.



**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)

<b>3. Article Addressed to:</b>  Mr. Gary D. Greet Royster Company Post Office Drawer 797 Mulberry, FL 33860	<b>4. Article Number</b> P 938 762 649  <b>Type of Service:</b> <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise  Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
<b>5. Signature - Address</b> X	<b>8. Addressee's Address (ONLY if requested and fee paid)</b>
<b>6. Signature - Agent</b> X <i>[Signature]</i>	
<b>7. Date of Delivery</b> 8-18-89	

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

P 938 762 649

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

Sent to	
Mr. Gary D. Greer, Royster Co.	
Street and No. P. O. Drawer 797	
P.O., State and ZIP Code Mulberry, FL 33860	
Postage	S
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	S
Postmark or Date	
Mailed: 8-16-89	
Permit: AC 53-163740	

PS Form 3800, June 1985

Check Sheet

Company Name: Royster Company  
Permit Number: AC 53-163740  
PSD Number: \_\_\_\_\_  
Permit Engineer: \_\_\_\_\_

**Application:**

- |  |                          |
|--|--------------------------|
| <input checked="" type="checkbox"/> Initial Application    | Cross References:        |
| <input checked="" type="checkbox"/> Incompleteness Letters | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Responses              | <input type="checkbox"/> |
| <input type="checkbox"/> Waiver of Department Action       | <input type="checkbox"/> |
| <input type="checkbox"/> Department Response               |                          |
| <input type="checkbox"/> Other                             |                          |

**Intent:**

- Intent to Issue
  - Notice of Intent to Issue
  - Technical Evaluation
  - BACT or LAER Determination
  - Unsigned Permit
- Correspondence with:
- EPA
  - Park Services
  - Other
- Proof of Publication
    - Petitions - (Related to extensions, hearings, etc.)
    - Waiver of Department Action
    - Other

**Final**

**Determination:**

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

**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. Gary D. Greet Royster Company P. O. Drawer 797 Mulberry, FL 33860	4. Article Number P 938 762 734
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Jessie Thompson</i>	
7. Date of Delivery 11-9-89	

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

P 938 762 734

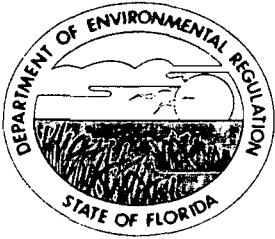
**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Gary D. Greet, Royster Co.	
Street and No. P. O. Drawer 797	
P.O., State and ZIP Code Mulberry, FL 33860	
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: 11-7-89 Permit: AC 53-163740	

PS Form 3800, June 1985



# 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 27, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gary D. Greer  
Royster Company  
P. O. Drawer 797  
Mulberry, Florida 33860

Dear Mr. Greer:

Re: Amendment of Molten Sulfur System Construction  
Permit No. AC 53-163740

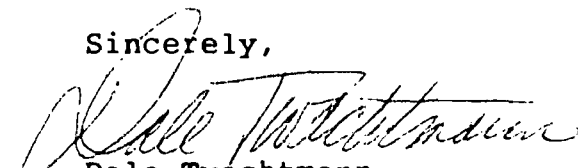
To clarify the visible emissions testing requirement for the above facility, DER will amend Specific Condition No. 6.

From: Initial and annual compliance tests shall be conducted in accordance with the July 1, 1988, version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions (VE).

To: Initial compliance tests shall be conducted in accordance with the July 1, 1988, version of 40 CFR 60 Appendix A, using EPA Method 9. For the storage tank vents and the two sulfur pits' vents the tests shall be conducted while the tank and pits are being filled. VE tests shall be required again at the time of renewing the operation permits.

This letter must be attached to the above mentioned permit and shall become a part of that permit.

Sincerely,



Dale Twachtmann  
Secretary

DT/kt


cc: B. Thomas, SW District



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
OCT 24 1989

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

# Interoffice Memorandum

TO: Dale Twachtmann  
FROM: Steve Smallwood   
DATE: October 24, 1989  
SUBJ: Permit Amendment for Royster Company  
Molten Sulfur System, AC 53-163740

Attached for your approval and signature is a permit amendment prepared by the Bureau of Air Regulation for Royster Company to clarify the testing requirements for the molten sulfur system located in Mulberry, Polk County, Florida.

I recommend your approval and signature.

attachment

SS/pr

Royster Company  
P.O. Drawer 797  
Mulberry, Florida 33860  
(813) 425-1176

RECEIVED

SEP 11 1989

DER-BAOM

**Royster**

CERTIFIED MAIL

September 7, 1989

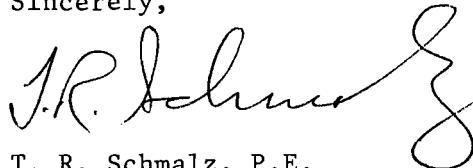
Mr. C. H. Fancy, P.E.  
Deputy Chief, Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: D.E.R. File Number AC53-163740

Dear Mr. Fancy:

Enclosed is the proof of publication of the Intent to Issue required for the above subject permit.

Sincerely,



T. R. Schmalz, P.E.  
Manager of Engineering &  
Environmental Services

TRS:sk

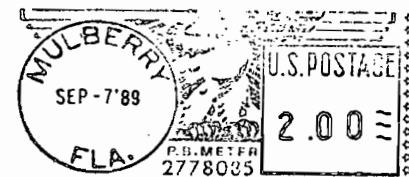
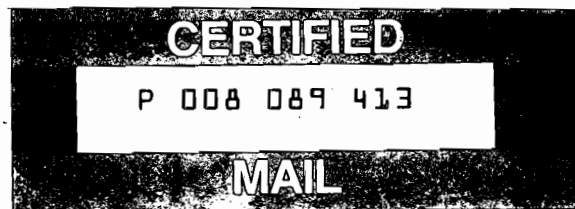
enclosure

cc: G. L. Dahms, General Manager

*P. Raval*  
*H. Kerns, see Dist.*

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

**Royster**



Mr. C. H. Fancy, P.E.  
Deputy Chief, Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

1 1 1 1 1 1 1 1 1 1 1 1



# 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 .....

### Issue Permit

in the .....

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

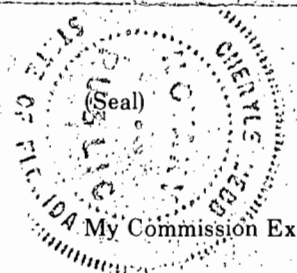
August 24; 1989

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 postoffice 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 ..... *Stephen P. DeWitt* .....  
Controller

Sworn to and subscribed before me this ... 28th .....

day of August ..... A.D. 19 89



*Charles W. [Signature]*  
Notary Public

NOTARY PUBLIC, STATE OF FLORIDA.  
MY COMMISSION EXPIRES: JUNE 25, 1991.  
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Attach Notice Here

### 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 Royster Company, Post Office Drawer 797, Mulberry, FL 33860, for the existing molten sulfur storage and handling system located at Royster's facility near Mulberry, Polk County, Florida. A determination of the Best Available Control Technology (BACT) was not required. 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 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.

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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 Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

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

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of publication of this notice will be considered in the Department's final determination.

K355 — 8-24; 1989

*file copy*

Royster Company  
P. O. Drawer 797  
Mulberry, Florida 33860  
(813) 425-1176

**RECEIVED** **Royster**

**JUN 19 1989**

A Cedar Holdings Company

CERTIFIED MAIL

**DER-BAQM**

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

RE: Sulfur Facility Permitting  
AC53-163740

Dear Mr. Fancy:

Below are responses to the questions in your additional information request letter of May 17, 1989.

1. Sulfur consumption for 1600 TPD 100% basis H<sub>2</sub>SO<sub>4</sub> is 525 TPD.  
 $525 \times 2000 = 1,050,000 \text{ \#/Day}$   
Sulfur Density @ 270°F  $\approx 111 \text{ \#/ft}^3$   
 $\therefore 1,050,000 \text{ \#/D} / 111 \text{ \#/ft}^3 = 9460 \text{ ft}^3/\text{Day}$

Average daily unloading rate of 525 tons of sulfur would only displace a maximum of 9460 ft<sup>3</sup> of tank air per day. Since sulfur is being withdrawn from the storage tank simultaneously the actual displacement is less than this.

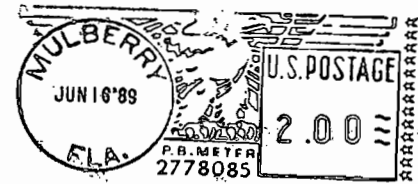
The value of 18 cfm per vent used for our tank was supplied by John B. Koogler, principle with Koogler and Associates, Gainesville, Florida. This value, along either the typical loading of 0.3 gr./ft<sup>3</sup> is based on sampling of similar tanks. Air flow-through due to wind is the reason that the air flow value is higher than displacement alone would account for. The air flow-through would vary depending on wind direction and velocity.

Instantaneous emission rate during tank filling operations is not the significant consideration. The daily average filling rate is the significant value. The emission for displaced air using 0.3 gr/ft<sup>3</sup> for loading would be  $9460 \text{ ft}^3/\text{Day} \times 0.3 \text{ gr}/\text{ft}^3 / 7000 \text{ gr}/\# \times 365 = 148 \text{ \#/Yr}$ .  $148/2000 = 0.074 \text{ TPY}$ . The originally submitted calculations showing the typical flow-through and loading values would seem to be conservative.

2. Typical sulfur delivery vehicles are 22 ton trucks and 100 ton railcars. Typical delivery frequency would be either  $525/22 = 24$  trucks per day or 5.25 railcars or a combination of some lesser number of each to supply 525 tons of sulfur to the storage tank.

Emissions from the vehicles while at the Royster Facility are an indeterminate. It is unlikely that there are any measurable emissions from either the trucks or the railcars. As these vessels are unloaded, by gravity, air is drawn into them as they empty.

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

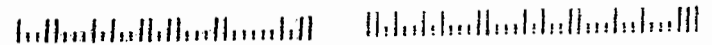


**Royster**

A Cedar Holdings Company

RETURN RECEIPT  
REQUESTED

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



3. The only other sources of sulfur emissions, in addition to the storage tank, would be the dump pits. These are covered and are equipped with pumps which transfer the sulfur to the storage tank after it has been dumped from the trucks/railcars. A displacement of the same 9460 ft<sup>3</sup>/Day would occur from one or the other of the dump pits. Assuming the same loading of 0.3 gr/ft<sup>3</sup> for the air in the dump pits this would result in 148 #/yr of emission from the pits.

4. Other pollutants which could be expected to be present in the vent air from the storage tank and the dump pits are delineated in a report by TRC Environmental Consultants, Inc. This report is titled "Preliminary Report On Emissions From Tank Number 4 At Sulfur Terminal Co., Inc., Tampa, Florida" - TRC Project 2502-E51, December 30, 1983.

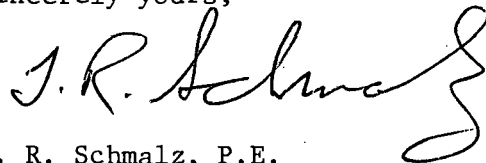
Average emissions for the tank, venting volumes which are on the same order of magnitude as the Royster tank assumed values, are listed as follows:

SO<sub>2</sub> : 0.267 #/Hr.  
H<sub>2</sub>S : 0.064 #/Hr.  
TRS : 0.181 #/Hr. (H<sub>2</sub>S equivalent)

The tank tested was a 10,000 ton tank with a continuous purge air system. As would be expected the emissions of these additional pollutants is a minor consideration.

This response will hopefully result in completing the application requirements.

Sincerely yours,



T. R. Schmalz, P.E.  
Manager of Engineering and  
Environmental Services

TRS:sk

cc: G.L. Dahms, General Mgr.

*Copied: Pradeep Raval  
B. Thomas, SW Dist,*

**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.    2.  Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. T. R. Schmalz Royster Company P. O. Drawer 797 Mulberry, Florida 33860	4. Article Number P 274 010 385 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Devi Vach</i>	
7. Date of Delivery <i>5-22-89</i>	

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

P 274 010 385

**RECEIPT FOR CERTIFIED MAIL**

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

\* U.S.G.P.O. 1985-480-794

PS Form 3800, June 1985

Sent to Mr. T. R. Schmalz, Royster Co.	
Street and No. P. O. Drawer 797	
P.O., State and ZIP Code Mulberry, FL 33860	
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: 5-18-89 Permit: AC 53-163740	



# 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

May 17, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. T. R. Schmalz  
Royster Company  
P. O. Drawer 797  
Mulberry, Florida 33860

Dear Mr. Schmalz:

Re: Sulfur Facility Permitting, AC 53-163740.

The Department has received your application package dated April 13, 1989, and deemed it incomplete. Please submit the following information including all assumptions, calculations and reference material:

1. Please explain how the basis for calculating the emission estimates apply to your facility. What emissions are expected during tank filling operations?
2. What is the typical capacity of the sulfur delivery vehicle(s)? What is the typical delivery frequency? Please estimate the expected emissions from the sulfur delivery vehicle(s) while it is at Royster's facility.
3. Please submit air emission estimates for any other source/equipment/process within (or associated with) the sulfur facility which has not yet been permitted by DER.
4. Submit air emission estimates for all the air pollutants emitted by the sources in the sulfur facility.

If you have any questions please call Pradeep Raval at (904) 488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/PR/plm

cc: B. Thomas, SW District

*file copy*

Royster Company  
P. O. Drawer 797  
Mulberry, Florida 33860  
(813) 425-1176

**Royster**  
A Cedar Holdings Company

CERTIFIED MAIL

April 13, 1989

Mr. Clair Fancy  
Central Air Permitting Section  
State of Florida  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

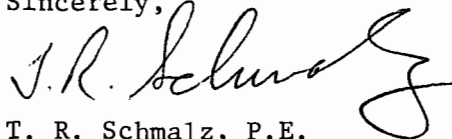
RE: Construction Permit For Existing  
Molten Sulfur Storage and Handling  
Facility

RECEIVED  
DER-MAIL ROOM  
1989 APR 19 AM 11:58

Dear Mr. Fancy:

Enclosed is an application for Permit To Construct, in quadruplicate, for the above subject facility. Also enclosed is a check for \$200 as required in 17-4.050(4)(a)l.e. for processing fee.

Sincerely,

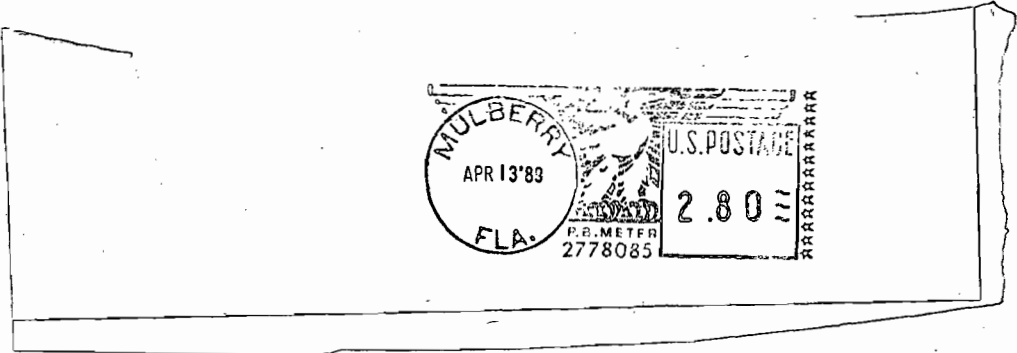


T. R. Schmalz, P.E.  
Manager of Engineering  
and Environmental Services

TRS:sk

cc: G. L. Dahms, Gen. Mgr.

*copied: P. Raval  
B. Thomas, SW Dist*



**Royster**  
A Cedar Holdings Company

**Royster Company**  
P.O. Box 797 — Mulberry, Florida 33860

---

Mr. Clair Fancy  
Central Air Permitting Section  
State of Florida  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

A rectangular box containing the company name "Royster" and "Royster Company" with their address and contact information. A horizontal line separates the company header from the recipient's address.



# Royster

## ACCOUNTS PAYABLE CHECK

ROYSTER MULBERRY  
P.O. DRAWER 797 MULBERRY, FL 33860

DATE

04/17/89

62-22/311

PAY EXACTLY

TWO HUNDRED AND NO/100

CHECK NUMBER

0012675

No

87012675

AMOUNT

\$200.00

CoreStates Bank  
of Delaware N.A.

Pay to the order of

DEPT OF ENVIROMENTAL REG.  
TWIN TOWERS OFFICE BLDG.  
2600 BLAIR STONE ROAD  
TALLAHASSEE FL 32399

*Gary D. Greer*  
AUTHORIZED SIGNATURE

Kiln No. 4 with Venturi Scrubber; Peaking

SOURCE LOCATION: Street S.R. 60 E - 1.5 Miles East of Mulberry City NA

UTM: East 17-406.7 North 3085.2

Latitude 27° 53' 16" N Longitude 81° 56' 54" W

APPLICANT NAME AND TITLE: GARY D. GREER, SENIOR VICE PRESIDENT

APPLICANT ADDRESS: P.O. DRAWER 797, MULBERRY, FLORIDA 33860

### SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

#### A. APPLICANT

I am the undersigned owner or authorized representative\* of ROYSTER COMPANY

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: *Gary D. Greer*

GARY D. GREER, SENIOR VICE PRESIDENT

Name and Title (Please Type)

Date: 4/12/89 Telephone No. 813/425-1176

#### 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

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

#200 pd.  
4-19-89  
Rept. 112607

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



AC53-163740

BOB MARTINEZ  
GOVERNOR

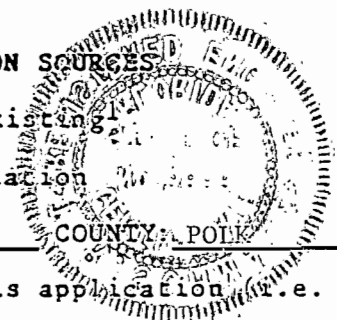
DALE TWACHTMANN  
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCE

SOURCE TYPE: MOLTEN SULFUR STORAGE [ ] New<sup>1</sup> [XX] Existing

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

COMPANY NAME: ROYSTER COMPANY



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) SULFUR TANK

SOURCE LOCATION: Street S.R. 60 E - 1.5 Miles East of Mulberry City NA

UTM: East 17-406.7 North 3085.2

Latitude 27° 53' 16" N Longitude 81° 56' 54" W

APPLICANT NAME AND TITLE: GARY D. GREER, SENIOR VICE PRESIDENT

APPLICANT ADDRESS: P.O. DRAWER 797, MULBERRY, FLORIDA 33860

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\*Attach letter of authorization

Signed: *Gary D. Greer*  
GARY D. GREER, SENIOR VICE PRESIDENT  
Name and Title (Please Type)

Date: 4/12/89 Telephone No. 813/425-1176

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

<sup>1</sup> 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 T. R. Schmalz

T. R. SCHMALZ  
Name (Please Type)

ROYSTER COMPANY  
Company Name (Please Type)

P.O. DRAWER 797, MULBERRY, FLORIDA 33860  
Mailing Address (Please Type)

Florida Registration No. 13656 Date: \_\_\_\_\_ Telephone No. 813/425-1176

**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.

The project consists of a 1000 S.T. vented, molten sulfur storage tank with attendant truck and railcar below grade dump pits and transfer pumps and piping.

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

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.)

NA

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

NA

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? \_\_\_\_\_
  - b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_
  - c. If yes, list non-attainment pollutants. \_\_\_\_\_
2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. NO
3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. NO
4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? NO
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? \_\_\_\_\_
  - 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 justifi-  
cation for any answer of "No" that might be considered questionable.

**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	PARTICULATE	100	44,000	

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

1. Total Process Input Rate (lbs/hr): NA
2. Product Weight (lbs/hr): NA

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

Name of Contaminant	Emission <sup>1</sup>		Allowed <sup>2</sup> Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
SULFUR	0.19	0.81	EXEMPT*	20% OPACITY**	NA		

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>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)

\* 17-2.600(11)(e)(2)

<sup>3</sup>Calculated from operating rate and applicable standard.

\*\* 17-2.600(11)(a)(7)

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3).

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels

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 \_\_\_\_\_ Maximum \_\_\_\_\_

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

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

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ ft.

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM Gas Exit Temperature: \_\_\_\_\_ °F.

Water Vapor Content: \_\_\_\_\_ % Velocity: \_\_\_\_\_ FPS

**SECTION IV: INCINERATOR INFORMATION**

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) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ 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: NA

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

NA

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.

- NA 1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
- XX 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.
- NA 3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
- NA 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.)
- NA 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).
- NA 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.
- XX 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).
- XX 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.



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 NA

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

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:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- 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:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>
  - d. Capital Cost:
  - e. Useful Life:
  - f. Operating Cost:
  - g. Energy:<sup>2</sup>
  - h. Maintenance Cost:
  - i. Availability of construction materials and process chemicals:
  - j. Applicability to manufacturing processes: 0
  - 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:<sup>1</sup>
  - d. Capital Costs:
  - e. Useful Life:
  - f. Operating Cost:
  - g. Energy:<sup>2</sup>
  - 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:<sup>1</sup>
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:<sup>2</sup>
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
  - a. (1) Company:
  - (2) Mailing Address:
  - (3) City:
  - (4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration


(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration


(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>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 NA

A. Company Monitored Data

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ 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

B. 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) \_\_\_\_\_

C. 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.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO <sup>2</sup>	_____	grams/sec

E. 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.

F. Attach all other information supportive to the PSD review.

G. 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.

H. 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.

Royster Company Molten Sulfur Handling Facilities at Mulberry Phosphate Processing Plant.

Molten sulfur is burned in a contact sulfuric acid plant with a nominal capacity of 1600 TPD 100% basis  $H_2SO_4$ . Operation of this plant is scheduled for 24 hours per day, 7 days per week, 50 weeks per year. During 1988 183,557 S.T. of sulfur was received.

The molten sulfur burned in this plant is received by tank truck and railcar tanker. Sulfur in trucks is in molten state when it arrives plant site and is gravity fed into a below grade, covered dump pit from where it is transferred by two submerged pumps to a steam coil fitted, insulated tank. Rail tank car sulfur is generally solidified in the car when it arrives at jobsite. Steaming stations for melting the sulfur parallel car storage tracks. The cars are emptied by gravity through bottom unloading valves into a single funnel located at track centerline. The funnel connects under the track in a pipe to a below grade dump pit which in turn is equipped with transfer pumps and piping to the same tank that the truck pit empties into.

The tank is 31' in diameter with 24' sidewalls. There are four vents at the top of this tank. These vents are 180° steam jacketed steel elbows. One is centrally located in the tank roof and the other three are located around the roof periphery 120° apart. The tank is equipped with a float and gauge board device for monitoring liquid level.

Operation of this system is under continuous surveillance by the sulfuric acid plant operating personnel. There have been minor spills on occasion due to brief periods of inattention. The spills which have occurred have not been in traffic areas and have been cleaned up within a few days of occurrence. Fugitive particulate emission from solid sulfur spills does not occur.

JAN. 26, 1989

## SUPPLEMENTAL REQUIREMENT 2

### BASIS OF EMISSION ESTIMATE

THE FOLLOWING INFORMATION WAS OBTAINED FROM MR. JOHN B. KOGLER, PRINCIPLE WITH KOGLER AND ASSOCIATES, GAINSVILLE, FL.

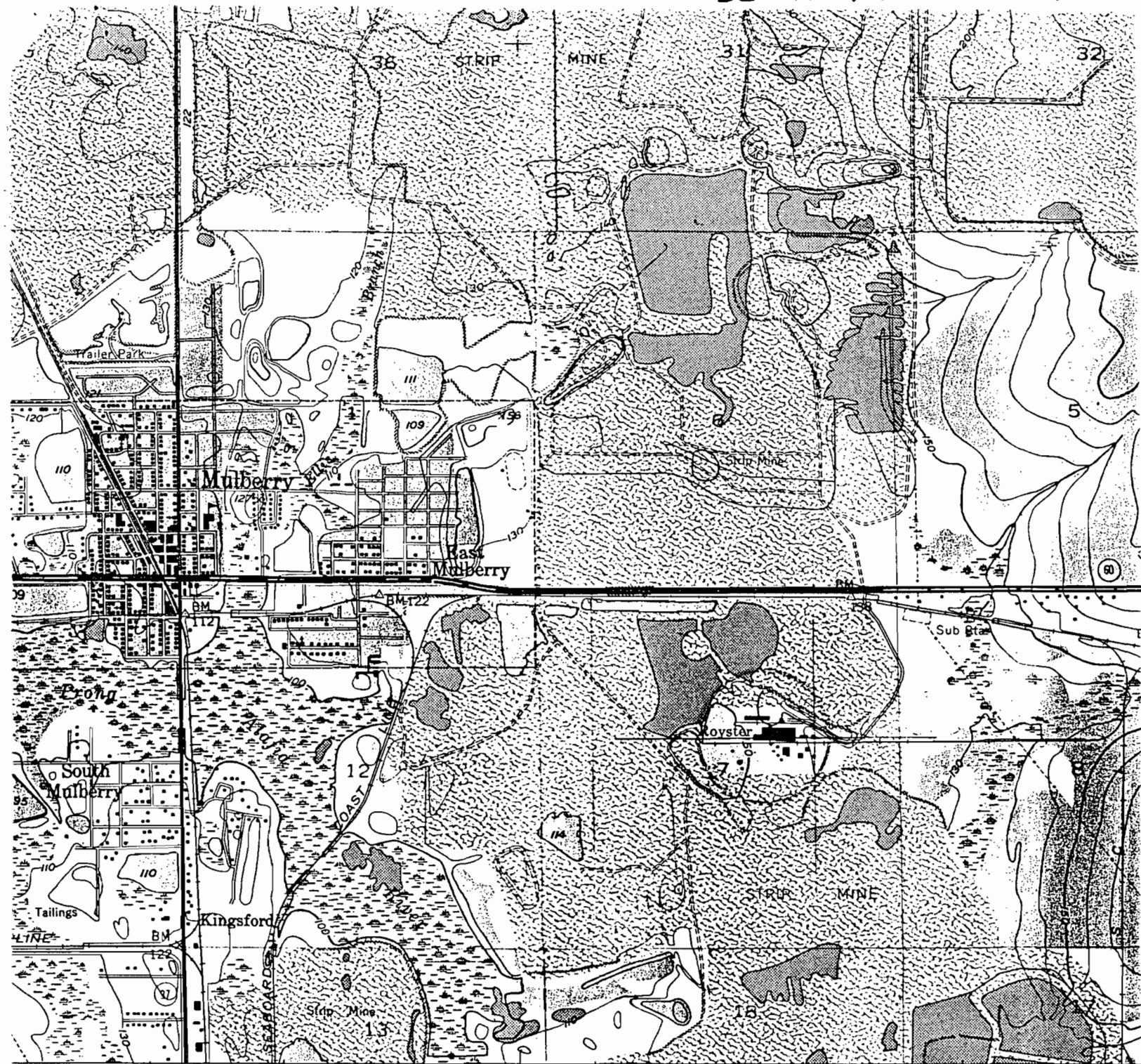
1. TYPICAL FLOW RATE FOR A VENTED MOLTEN SULFUR STORAGE TANK : 18 CFM PER VENT
2. TYPICAL SULFUR PARTICULATE LOADING :  
 $0.3 \text{ gr} / \text{ft}^3$

### CALCULATION OF EMISSION

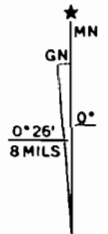
$$\frac{4 \times 18 \text{ ft}^3 / \text{min} \times 0.3 \text{ gr} / \text{ft}^3 \times 60 \text{ min} / \text{HR.}}{7000 \text{ gr} / \#} = 0.185 \# / \text{HR}$$

$$\frac{0.185 \# / \text{HR} \times 24 \times 365}{2000 \# / \text{t}} = 0.81 \text{ t} / \text{YR}$$

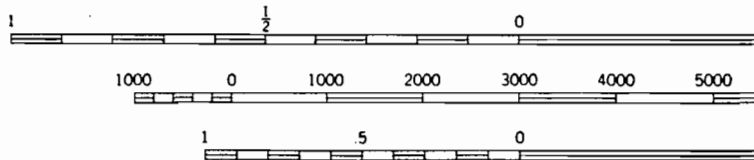
SECTION V - ITEM 7



PIERCE 2.5 MI. ADLEY JUNCTION 5.7 MI. IRVEY  
 510 000 FEET R. 23 E. 57'30" R. 24 E. 1407 (BRADLEY JUNCTION) 4639 IV SW  
 SCALE 1:24000



UTM GRID AND 1972 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 10 FEET  
 DATUM IS MEAN SEA LEVEL

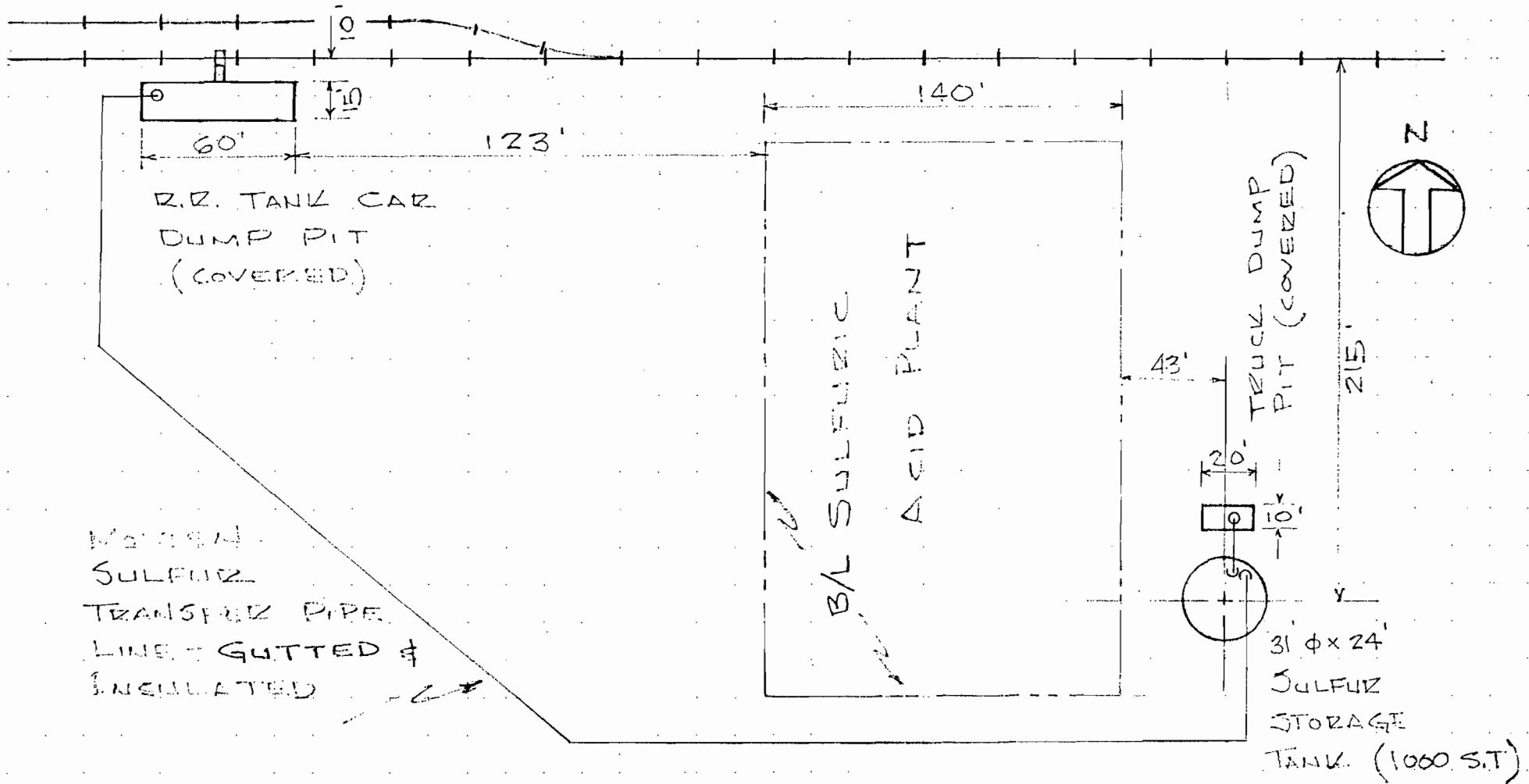
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20508  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE

jhs



Best Available Copy

RAIL CAR STEAMING - 400'



PLOT PLAN

1" = 60'

ROYSTER COMPANY - MULBERRY, FLA.

SULFUR RECEIVING, HANDLING, & STORAGE