

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. John W. Moon, Jr. Vice President Sulfur Terminals Co., Inc. 835 Union Street New Orleans, LA 70112	4. Article Number P 256 396 185
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X <i>Ruth Gordon</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 1990	

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

P 256 396 185
RECEIPT FOR CERTIFIED MAIL

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

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

Sent to Mr. John W. Moon, Jr., Sulfur Terminals	
Street and No. 835 Union St.	
P.O., State and ZIP Code New Orleans, LA 70112	
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: 8-28-90 Permit: AC 29-167678	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

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

Bob Martínez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. John W. Moon, Jr., Vice President
Sulfur Terminals Co., Inc.
835 Union Street
New Orleans, LA 70112

August 28, 1990

Enclosed is construction permit No. AC 29-167678 to construct a molten sulfur storage and handling system at your facility in Tampa, Hillsborough County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


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

Copy furnished to:

B. Thomas, SW District
I. Choronenko, HCEPC
John B. Koogler, 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 buisness on 8-28-90.

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

Yumi Jaben
Clerk

8-28-90
Date

Final Determination

Sulfur Terminals Company, Inc.
Port Tampa Facility
Tampa, Hillsborough County, Florida

Molten Sulfur Storage and Handling System

Permit No. AC 29-167678

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

August 23, 1990

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a molten sulfur storage and handling system at Sulfur Terminals Co., Inc. in Tampa, Hillsborough County, Florida, was distributed on June 27, 1990. The Notice of Intent to Issue was published in the Tampa Tribune on July 23, 1990. Copies of the evaluation were available for public inspection at the Department's Southwest District office in Tampa and Bureau of Air Regulation office in Tallahassee.

No comments were submitted on the Department's Intent to Issue the permit. However, the Department has comments on Section B of the Source Impact Analysis. These comments are as follows:

Air Quality Impacts

Because the H₂S emission estimates were 72.65 tons per year, air quality dispersion modelling was performed for H₂S emissions. One year of meteorological data was used in the model. This modelling was done after the Department had issued its "intent to issue" a permit for this project. The maximum predicted impacts of these H₂S emissions are as follows:

Concentration (ug/m ³)	Averaging Time
1153	1-hour
533	8-hour
230	24-hour
24	Annual

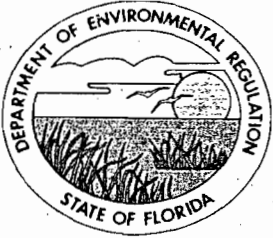
The Department does not have any published H₂S ambient standards which apply to this project. The maximum predicted 8-hour concentration is 1/25th the value of the threshold limit value (TLV) of 14,000 ug/m³, which is an 8-hour occupational exposure level. However, this maximum predicted 8-hour concentration is greater than the Department's unpublished guideline of 140 ug/m³ for H₂S. This level is intentionally very conservative because an ample margin of safety is incorporated in developing the ambient guidelines. The maximum predicted 1-hour concentration of 1153 ug/m³ is compared with the following hourly concentrations taken from Table 2.1 of the EPA Guideline Series, Kraft Pulping-Control of TRS Emissions from Existing Mills, EPA-450/2-78-003b:

- 150 ug/m³ - Smell slightly perceptible.
- 500 ug/m³ - Smell definitely perceptible.
- 15,000 ug/m³ - Minimum concentration causing eye irritation.
- 30,000 - 60,000 ug/m³ - Strongly perceptible but not intolerable smell. Minimum concentration causing lung irritation.

The project is located in an industrial area away from private residences.

This source has been in existence for about thirty years with no known complaints about H₂S emissions or odors. Moreover, the Department has allowed permitted TRS/H₂S emissions of greater than 200 tons per year for the pulp and paper mills in the state.

The final action of the Department will be to issue construction permit No. AC 29-167678 as proposed in the Technical Evaluation and Preliminary Determination.



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:

Sulfur Terminals Company, Inc.
835 Union Street
New Orleans, LA 70112

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

County: Hillsborough

Latitude/Longitude: 27°55'44"N

82°26'30"W

Project: Port Tampa Terminal/Molten
Sulfur Storage & Handling Facility

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

For an after-the-fact construction permit for molten sulfur storage and handling facility consisting of six storage tanks of 10,000 LT capacity per tank; two storage tanks of 15,000 LT per tank, along with three truck loadout stations and a ship unloading facility. Emissions from this facility are controlled by limiting the throughput to 3.5 million long tons of molten sulfur per year, and through proper operation and maintenance practices.

The facility is located in Port Tampa and the UTM coordinates are Zone 17, 358.0 km East and 3090.0 km North.

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

Attachments are listed below:

1. STC's application received July 20, 1989.
2. DER's letter dated August 18, 1989.
3. STC's response received September 27, 1989.
4. DER's letter dated October 26, 1989.
5. STC's response received April 23, 1990.

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

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

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

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

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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 corrected promptly.

SPECIFIC CONDITIONS:

1. Sulfur Terminals Company's molten sulfur storage and handling terminal shall be allowed to operate continuously (i.e. 8760 hrs/yr).

2. Visible emissions (VE) shall not exceed 10% opacity from any loading/unloading/storage operations from this facility, except during periods of ship unloading when VE shall not exceed 15% opacity.

3. No objectionable odors will be allowed in accordance with F.A.C. Rule 17-2.620(2).

4. The permittee shall employ proper operation and maintenance procedures to control emissions from the molten sulfur handling facilities subject to Rule 17-2.600(11) of the Florida Administrative Code.

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

SPECIFIC CONDITIONS:

5. Initial compliance tests shall be conducted before December 31, 1990, in accordance with the July 1, 1988, version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions. Such tests shall be conducted for a minimum duration of thirty (30) minutes at each vent of storage tank, each storage tank, each truck and ship loadout, during molten sulfur loading/unloading/storage operations. VE tests shall be conducted annually if required by the Southwest District office at the time of issuing or renewing operation permits.

6. Any change in the method of operation, equipment, or operating hours shall be submitted to the Bureau of Air Regulation and the Hillsborough County Environmental Protection Commission (HCEPC) offices for approval.

7. For emission inventory and PSD purposes, the estimated maximum emissions from the ship unloading, storage tanks (during filling and non-filling) and truck loadouts for molten sulfur storage and handling system are:

Contaminant	Each Storage Tank		All (8) Storage Tanks		Ship Unloading		Truck Filling		Total Facility Emissions	
	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr
Molten Sulfur										
SP	0.38	0.89	3.04	7.12	0.27	0.20	0.14	0.61	3.45	7.93
PM ₁₀	0.82	1.90	6.56	15.2	0.58	0.42	0.30	1.31	7.44	16.93
TP	0.93	2.15	7.54	17.2	0.66	0.48	0.34	1.49	8.44	19.17
VOC	1.14	2.65	9.12	21.2	0.81	0.59	0.41	1.83	10.34	23.62
SO ₂	0.12	0.27	0.96	2.16	0.09	0.07	0.04	0.19	1.09	2.42
H ₂ S	2.92	6.77	23.36	54.16	6.59	4.80	3.91	17.29	33.86	72.65

8. The HCEPC office shall be given written notice at least 15 days prior to compliance testing. The compliance test results shall be submitted to the HCEPC office within 45 days of such testing.

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

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

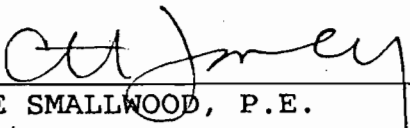
Expiration Date: March 31, 1991

SPECIFIC CONDITIONS:

10. An application for an operation permit must be submitted to the HCEPC office and 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. Rule 17-4.220).

Issued this 28 day
of August, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for 

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood
FROM: Clair Fancy *Clair Fancy*
DATE: August 23, 1990
SUBJ: Approval of Construction Permit No. AC 29-167678
Sulfur Terminals Company, Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a molten sulfur storage and handling system.

No comments were received during the public notice period.

Day 90, after which this permit will be issued by default, is August 30, 1990.

I recommend your approval and signature.

CF/MB/plm

Attachments

Check Sheet

Company Name: Sulphur Terminals Company, Inc.
Permit Number: AC 29-167678
PSD Number: _____
Permit Engineer: _____

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

Cross References:

-
-
-

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



W. GRADY SWANN, INC.

3814 West Jackson St. • Pensacola, Florida 32505
(904) 432-5766 • Fax (904) 469-0335 • Panama City (904) 747-7030 • Mobile (334) 433-7171

December 13, 1995

RECEIVED

DEC 19 1995

BUREAU OF
AIR REGULATION

N S P S Coordinator
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32301-8241

re: Pensacola Terminals, Inc.
3088 Barrancas Ave.
Pensacola, Florida 32507

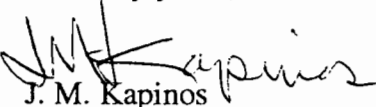
Dear Sirs:

Pensacola Terminals, Inc. is in the process of installing an internal floating roof (IFR) in an existing petroleum (gasoline) storage tank. The IFR volatile emissions control system is being retrofitted to tank #201, a 20,000 bbl storage tank.

In accordance with 40 CFR 60 Kb, Standards of Performance for Volatile Liquid Storage Vessels (including petroleum liquid storage vessels), 30 day notification is given for pre filling inspection of the IFR system

If you have any questions, please call me at (904) 432-5766.

Sincerely yours,


J. M. Kapinos
Environmental Engineer

cc: Mr. Ed Gray, Pensacola Terminals, Inc.
FDEP Northwest District Office

CM: P 259 500 501

PM: 7/23/90

Tampa, Florida

File Copy

REPLY TO: POST OFFICE BOX 1315
TAMPA, FLORIDA 33601

SULPHUR TERMINALS

A DIVISION OF CANAL BARGE CO., INC.

835 UNION STREET SUITE 300 • NEW ORLEANS, LA 70112

RECEIVED

July 23, 1990
JUL 26 1990

DER-BAQM

Mr. Barry Andrews
Bureau of Air Regulation
Fla Department of Environmental Regulation
Twin Towers Office Bldg., 2600 Blair Stone Road
Tallahassee, Florida 32399-2400

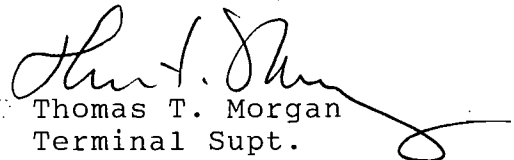
Dear Mr. Andrews:

We have attached "NOTICE OF INTENT OT ISSUE" as published in the legal ad section of the Tampa Tribune on July 23, 1990.

Please advise if we can be of further assistance.

Sincerely,

SULPHUR TERMINALS


Thomas T. Morgan
Terminal Supt.

CC: Mirza Baig 7/26/90 ARW

Cont. From Preceding Column

petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

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

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

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

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

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

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

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

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

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

Department of Environmental Regulation
Southwest District Office
4520 Oak Fair Blvd.
Tampa, Florida 33610-7347
Hillsborough County
Environmental Protection
Commission Air Program
1410 N. 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Barry Andrews 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.

3702 7/23/90

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 an after-the-fact construction permit for the existing six storage tanks of 10,000 tons capacity per tank, two storage tanks of 15,000 tons capacity per tank, to store molten sulfur in Tampa (Port Tampa), Hillsborough County, Florida, along with three truck-filling stations and a ship unloading facility, to Sulfur Terminals Co., Inc., 835 Union Street, New Orleans, LA 70112. A determination of 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 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

Cont. Next Column

RECEIVED

JUL 26 1990

DER-BAQM

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. John W. Moon, V.P. Sulfur Terminals Company, Inc. 835 Union Street New Orleans, LA 70112	4. Article Number P 256 396 145
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Addressee X <i>John Moon</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 7-9-90	

PS Form 3811, Apr. 1989

★ U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

P 256 396 109

RECEIPT FOR CERTIFIED MAIL

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

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

Send to	<i>John Moon</i>
Street and No.	<i>Sulfur Terminals</i>
P.O., State and ZIP Code	<i>835 Union St.</i>
Postage	<i>New Orleans, LA</i>
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	<i>6-29-90</i>
	<i>ACA9-167678</i>

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

June 27, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

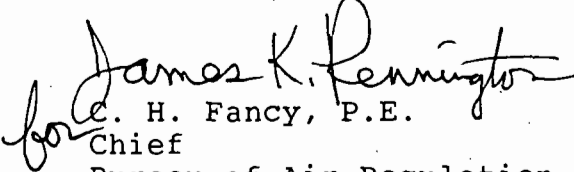
Mr. John W. Moon, Jr., Vice President
Sulfur Terminals Co., Inc.
835 Union Street
New Orleans, LA 70112

Dear Mr. Moon:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed after-the-fact construction permit to Sulfur Terminals Company, Inc. for molten sulfur storage and handling system at the Port of Tampa facility in Hillsborough County, Florida.

Please publish the attached "Notice of Intent to Issue" in the legal ad section of a newspaper of general circulation in the area affected and submit the proof of publication to the Department within seven days of publication, along with any written comments you wish to have considered concerning the Department's proposed action, to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,


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

CHF/MB/plm

Attachments

c: B. Thomas, SW District
I. Choronenko, HCEPC
John B. Koogler, P.E.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Sulfur Terminals Co., Inc.
835 Union Street
New Orleans, LA 70112

DER File No. AC 29-167678

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, Sulfur Terminals Company, Inc., applied on July 7, 1989, to the Department of Environmental Regulation for an after-the-fact construction permit for the existing six storage tanks of 10,000 tons capacity per tank, two storage tanks of 15,000 tons capacity per tank, to store molten sulfur along with three truck-filling stations and a ship unloading facility. The throughput of molten sulfur for this facility is about 3.5 million long tons per year.

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

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

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

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

The Petition shall contain the following information;

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

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

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

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

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

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

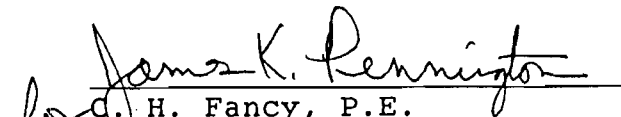
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


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

Copies furnished to:

B. Thomas, SW District
I. Choronenko, HCEPC
John B. Koogler, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 10-29-90.

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

Henry Jaber
Clerk

10-29-90
Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue an after-the-fact construction permit for the existing six storage tanks of 10,000 tons capacity per tank, two storage tanks of 15,000 tons capacity per tank, to store molten sulfur in Tampa (Port Tampa), Hillsborough County, Florida, along with three truck-filling stations and a ship unloading facility, to Sulfur Terminals Co., Inc., 835 Union Street, New Orleans, LA 70112. A determination of 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 of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

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

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

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

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

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

Hillsborough County Environmental Protection Commission
Air Program
1410 N. 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Barry Andrews 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

Sulfur Terminals Company, Inc.
Port Tampa Facility
Tampa, Hillsborough County, Florida

Molten Sulfur Storage and Handling System

Permit No. AC 29-167678

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

June 27, 1990

I. Application

A. Applicant

Sulfur Terminals Company, Inc.
835 Union Street
New Orleans, LA 70112

B. Project and Location

Sulfur Terminals Company, Inc. has applied for an after-the-fact construction permit for the existing six tanks of 10,000 tons capacity per tank and two 15,000 tons capacity per tank, three truck loadout stations and one ship unloading facility for molten sulfur storage and handling system in Tampa (Port Tampa), Hillsborough County, Florida.

C. Facility Category

The SIC Code is 5169 and the SCC Code is 3-01-070-02. Sulfur Terminals Company, Inc. applied for a construction permit on July 20, 1989, and was deemed complete on April 23, 1990.

II. Project Description

The Sulfur Terminals Company, Inc., Port Tampa terminal consists of a ship unloading system; three truck loadout systems; six storage tanks with a capacity of 10,000 long tons per tank, two tanks with 15,000 tons storage capacity per tank to store molten sulfur; and the associated transfer pumps and pipings.

The molten sulfur is delivered to the facility by ships with a capacity of about 24,000 LT. The molten sulfur is transferred from the storage tanks to either of the three truck loadout systems. The trucks usually have a capacity of about 25 long tons. Whenever molten sulfur is stored in the tanks they have to be steam heated.

All eight storage tanks are 40 ft. high, consisting of six smaller 10,000 ton tanks that are 81 ft. in diameter and two larger 15,000 ton tanks that are 99 ft. in diameter, and well insulated. Each tank has 2 perimeter vents (10" in diameter). The maximum annual throughput is 3.5 million long tons of molten sulfur. During the molten sulfur storing and transfer operations, both vents are opened. This terminal has appurtenant enclosed pipeline systems for off-loading of liquid sulfur from ships, and loading liquid sulfur into tank trucks.

III. Rule Applicability

The existing Sulfur Terminals Company, Inc. facility is minor in accordance with Rule 17-2.100. The molten sulfur storage and handling system will emit sulfur particulate matter and will be permitted in accordance with F.A.C. Chapters 17-2 and 17-4; and Chapter 403 of the Florida Administrative Code.

The facility is located in Port Tampa, in Hillsborough County, an area designated as nonattainment for ozone and particulate matter; unclassifiable for sulfur dioxide; and attainment for the other criteria pollutants; in accordance with F.A.C. Rules 17-2.410, 17-2.430 and 17-2.420, respectively.

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, or F.A.C. Rule 17-2.510(4), Nonattainment Area Review, because it is minor.

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) will be limited to 10% opacity, except during periods of ship unloading when VE shall not exceed 15% opacity. The sources are not subject to a weight emission limiting standard, in accordance with F.A.C. Rule 17-2.600(11)(3), since the sulfur particulate emissions from each individual source are less than 25 tons 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. VE tests will be required to be conducted for every point in the storage and handling system (every vent, truck/ship loading or transferring) for the initial compliance demonstration. The Department may require a retest annually.

IV. Source Impact Analysis

A. Emission Limitations

For the molten sulfur that is being stored or handled currently at this facility, the maximum hourly and annual emission estimates of SP, PM₁₀, VOC, H₂S, SO₂, and TP are summarized below.

Contaminant	Each Storage Tank		All (8) Storage Tanks		Ship Unloading		Truck Filling		Total Facility Emissions	
	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr
SP	0.38	0.89	3.04	7.12	0.27	0.20	0.14	0.61	3.45	7.93
PM ₁₀	0.82	1.90	6.56	15.2	0.58	0.42	0.30	1.31	7.44	16.93
TP	0.93	2.15	7.54	17.2	0.66	0.48	0.34	1.49	8.44	19.17
VOC	1.14	2.65	9.12	21.2	0.81	0.59	0.41	1.83	10.34	23.62
SO ₂	0.12	0.27	0.96	2.16	0.09	0.07	0.04	0.19	1.09	2.42
H ₂ S	2.92	6.77	23.36	54.16	6.59	4.80	3.91	17.29	33.86	72.65

The ship's emissions during ship unloading are expected to be temporary and negligible.

Visible emissions (VE) will be limited to 10% opacity during all loading/unloading operations, except 15% opacity during periods of ship unloading.

B. Air Quality Impacts

The Technical Evaluation of this project determined that ambient air monitoring or modelling would not be required to provide reasonable assurance that the Florida's air quality standards would not be violated.

V. Conclusion

Based on the information provided by Sulfur Terminals Company, Inc., the Department has reasonable assurance that the existing storage tanks and handling terminal, 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.

Contaminant	Each Storage Tank		All (8) Storage Tanks		Ship Unloading		Truck Filling		Total Facility Emissions	
	Max	Actual	Max	Actual	Max	Actual	Max	Actual	Max	Actual
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Molten Sulfur										
SP	0.38	0.89	3.04	7.12	0.27	0.20	0.14	0.61	3.45	7.93
PM ₁₀	0.82	1.90	6.56	15.2	0.58	0.42	0.30	1.31	7.44	16.93
TP	0.93	2.15	7.54	17.2	0.66	0.48	0.34	1.49	8.44	19.17
VOC	1.14	2.65	9.12	21.2	0.81	0.59	0.41	1.83	10.34	23.62
SO ₂	0.12	0.27	0.96	2.16	0.09	0.07	0.04	0.19	1.09	2.42
H ₂ S	2.92	6.77	23.36	54.16	6.59	4.80	3.91	17.29	33.86	72.65

The ship's emissions during ship unloading are expected to be temporary and negligible.

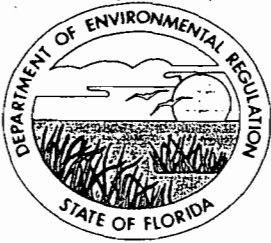
Visible emissions (VE) will be limited to 10% opacity during all loading/unloading operations, except 15% opacity during periods of ship unloading.

B. Air Quality Impacts

The Technical Evaluation of this project determined that ambient air monitoring or modelling would not be required to provide reasonable assurance that the Florida's air quality standards would not be violated.

V. Conclusion

Based on the information provided by Sulfur Terminals Company, Inc., the Department has reasonable assurance that the existing storage tanks and handling terminal, 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.



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:

Sulfur Terminals Company, Inc.
835 Union Street
New Orleans, LA 70112

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

County: Hillsborough

Latitude/Longitude: 27°55'44"N
82°26'30"W

Project: Port Tampa Terminal/Molten
Sulfur Storage & Handling Facility

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

For an after-the-fact construction permit for molten sulfur storage and handling facility consisting of six storage tanks of 10,000 LT capacity per tank; two storage tanks of 15,000 LT per tank, along with three truck loadout stations and a ship unloading facility. Emissions from this facility are controlled by limiting the throughput to 3.5 million long tons of molten sulfur per year, and through proper operation and maintenance practices.

The facility is located in Port Tampa and the UTM coordinates are Zone 17, 358.0 km East and 3090.0 km North.

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

Attachments are listed below:

1. STC's application received July 20, 1989.
2. DER's letter dated August 18, 1989.
3. STC's response received September 27, 1989.
4. DER's letter dated October 26, 1989.
5. STC's response received April 23, 1990.

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE: Sulfur Terminals Company, Inc. Permit Number: AC 29-167678
Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

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

PERMITTEE: Sulfur Terminals Company, Inc. Permit Number: AC 29-167678
Expiration Date: March 31, 1991

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

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

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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 corrected promptly.

SPECIFIC CONDITIONS:

1. Sulfur Terminals Company's molten sulfur storage and handling terminal shall be allowed to operate continuously (i.e. 8760 hrs/yr).

2. Visible emissions (VE) shall not exceed 10% opacity from any loading/unloading/storage operations from this facility, except during periods of ship unloading when VE shall not exceed 15% opacity.

3. No objectionable odors will be allowed in accordance with F.A.C. Rule 17-2.620(2).

4. The permittee shall employ proper operation and maintenance procedures to control emissions from the molten sulfur handling facilities subject to Rule 17-2.600(11) and Chapter 17-4 of the Florida Administrative Code.

PERMITTEE:

Sulfur Terminals Company, Inc.

Permit Number: AC 29-167678

Expiration Date: March 31, 1991

SPECIFIC CONDITIONS:

5. Initial compliance tests shall be conducted before December 31, 1990, in accordance with the July 1, 1988, version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions. Such tests shall be conducted for a minimum duration of thirty (30) minutes at each vent of storage tank, each storage tank, each truck and ship loadout, during molten sulfur loading/unloading/storage operations. VE tests shall be conducted annually if required by the Southwest District office at the time of issuing or renewing operation permits.

6. Any change in the method of operation, equipment, or operating hours shall be submitted to the Hillsborough County Environmental Protection Commission (HCEPC) office for approval.

7. For emission inventory and PSD purposes, the estimated maximum emissions from the ship unloading, storage tanks (during filling and non-filling) and truck loadouts for molten sulfur storage and handling system are:

Contaminant	Each Storage Tank		All (8) Storage Tanks		Ship Unloading		Truck Filling		Total Facility Emissions	
	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr	Max lb/hr	Actual T/yr
Molten Sulfur										
SP	0.38	0.89	3.04	7.12	0.27	0.20	0.14	0.61	3.45	7.93
PM ₁₀	0.82	1.90	6.56	15.2	0.58	0.42	0.30	1.31	7.44	16.93
TP	0.93	2.15	7.54	17.2	0.66	0.48	0.34	1.49	8.44	19.17
VOC	1.14	2.65	9.12	21.2	0.81	0.59	0.41	1.83	10.34	23.62
SO ₂	0.12	0.27	0.96	2.16	0.09	0.07	0.04	0.19	1.09	2.42
H ₂ S	2.92	6.77	23.36	54.16	6.59	4.80	3.91	17.29	33.86	72.65

8. The HCEPC office shall be given written notice at least 15 days prior to compliance testing. The compliance test results shall be submitted to the HCEPC office within 45 days of such testing.

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

PERMITTEE: Sulfur Terminals Company, Inc. Permit Number: AC 29-167678
Expiration Date: March 31, 1991

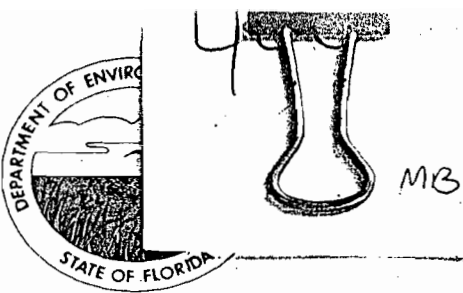
SPECIFIC CONDITIONS:

10. An application for an operation permit must be submitted to the EPCHC office and 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. Rule 17-4.220).

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



BEST AVAILABLE COPY

Department of Environmental Regulation

ce Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 27, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Clair: Two Comments

1) Everybody seems to have their own format for cover letters. Should this be standardized?
 Patty can do a YES - naval Trng when she gets back

2) These sulfur storage facilities emit high amounts of H₂S. 33.86 lbs/4- for this one. For something as toxic as H₂S in this amount maybe a toxic (AAE) evaluation should be done.
 what do you think? Barry

tion and Preliminary instruction permit to sulfur storage and ity in Hillsborough

it to Issue" in the culation in the area n to the Department any written comments

you wish to have considered concerning the Department's proposed action, to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

Barry -

6/27

I agree a quick model should be done for reasonable assurance. If this has to go out now because of the clock, we can do it in the next two weeks and add that into on final. You could then seal the final rather than this.

Clair

CHF/MB/plm

Attachments

c: B. Thomas, S
I. Choronenk
John B. Koog

Mirza is working on this
See Patty - it is in her active permit files.

RECEIVED

APR 23 1990

PEEPLS, EARL & BLANK

PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW
1800 2ND STREET
SUITE 888
SARASOTA, FLORIDA 34236
TELEPHONE (813) 366-1180
TELEFAX (813) 366-1183

DER-BAQM
MIAMI OFFICE
ONE BISCAYNE TOWER, SUITE 3636
TWO SOUTH BISCAYNE BOULEVARD
MIAMI, FLORIDA 33131
(305) 358-3000
FAX (305) 358-5079

JUDITH S. KAVANAUGH

REPLY TO:

Sarasota

April 17, 1990

Mr. Pradeep Raval
Air Resources Management
Department of Environmental Resources
2600 Blair Stone Road
Tallahassee, Florida 34399-2400

Re: Sulphur Terminals Company, Inc.: Pensacola Facility
Permit Application No. AC-17-167679

Sulphur Terminals Company, Inc.: Tampa Facility
Permit Application No. AC-29-168895


Dear Pradeep:

Attached please find executed and sealed Certificates Of Engineer with regard to the above-referenced Permit Applications. As you can see, Dr. Koogler has also corrected the locational references in each Permit Application.

I hope this will complete the application for the above-referenced facilities, and if any further information is required to complete the processing of the applications, please let me know.

Sincerely,

PEEPLS, EARL & BLANK, P.A.



Judith S. Kavanaugh
For The Firm

JSK/gc

Enclosures

*enc. middlewest
E. Thomas, SW Dist.
J. Campbell, EPC HC*

RECEIVED

MAR 23 1990

ENGINEERING REVIEW OF AIR POLLUTION SOURCE
CONSTRUCTION PERMIT APPLICATION FOR THE
SULPHUR TERMINALS COMPANY, INC.
Port of Tampa
Tampa, Florida

PEEPLES, EARL & BLANK
SARASOTA

Rule 17-4.05(3),FAC requires that applications and supporting plans and calculations for an air pollution source construction permit be reviewed by a Professional Engineer registered in the State of Florida. The air pollution source construction permit application for Sulphur Terminals Company, Inc., located at the Port of Tampa in Tampa, Florida, has been reviewed.

The location of the facility, as identified on page 1 of 12 of the permit application, should read:

UTM: East - (17) 358.0 km

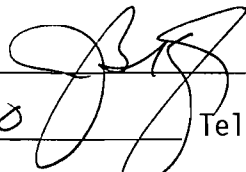
North - 3090.0 km

Latitude: 27° 55' 44" N

Longitude: 82° 26' 30" W

This is to certify that with the changes noted above, the engineering features and calculations contained in this air permit application have been examined by me and found to be in conformity with modern engineering principles applicable to the characterization of air pollutants addressed in the permit application. There is reasonable assurance, in my professional judgment, that the air pollution sources described in the application, 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 and required by the Department, a set of instructions for the proper maintenance and operation of the pollution sources.

Signed _____



Date: _____

3/21/90

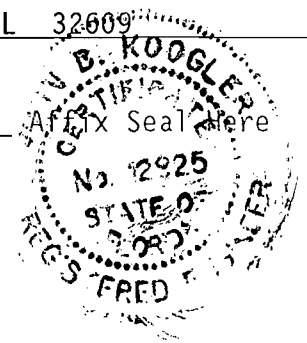
Telephone No (904) 377-5822

John B. Koogler
Name

Koogler & Associates
Company Name

4014 N.W. 13th Street Gainesville, FL 32609
Mailing Address

Florida Registration No. 12925



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)

<p>3. Article Addressed to:</p> <p>Mr. J. W. Moon, Jr. Sulphur Terminals Company, Inc. 835 Union Street New Orleans, LA 70112</p>	<p>4. Article Number P 938 762 724</p> <p>Type of Service:</p> <p><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</p>
<p>5. Signature - Addressee X <i>[Signature]</i></p> <p>6. Signature - Agent X</p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>7. Date of Delivery 10-30-89</p>	

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

P 938 762 724

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	
Mr. J. W. Moon, Jr., Sulphur	
Street and No. Terminals	
835 Union St.	
P.O., State and ZIP Code	
New Orleans, LA 70112	
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	
Permit: AC 29-167678	
Mailed: 10-26-89	

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 26, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. W. Moon, Jr.
Sulphur Terminals Company, Inc.
835 Union Street
New Orleans, LA 70112

Dear Mr. Moon:

Re: STI - Tampa Sulfur Facility Permitting, AC 29-167678

The Department has received your response dated September 25, 1989. Please complete Section 1.B., P.E. certification, for DER to be able to process your application.

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, P.E.
Bureau of Air Regulation

CHF/PR

cc: B. Thomas, SW District
I. Choronenko, HCEPC
J. Kavanaugh; Peeples, Earl and Blank

PEEPLES, EARL & BLANK

PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW
1800 2ND STREET
SUITE 888
SARASOTA, FLORIDA 34236
TELEPHONE (813) 366-1180
TELEFAX (813) 366-1183

MIAMI OFFICE
ONE BISCAYNE TOWER, SUITE 3636
TWO SOUTH BISCAYNE BOULEVARD
MIAMI, FLORIDA 33131
(305) 358-3000
FAX (305) 358-5079

JUDITH S. KAVANAUGH

REPLY TO: Sarasota

RECEIVED

September 25, 1989

SEP 27 1989

DER-BAQM

Claire H. Fancy, Deputy Chief
Air Resource Management
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
2600 Blair Stone Road
Tallahassee, Florida 34399-2400

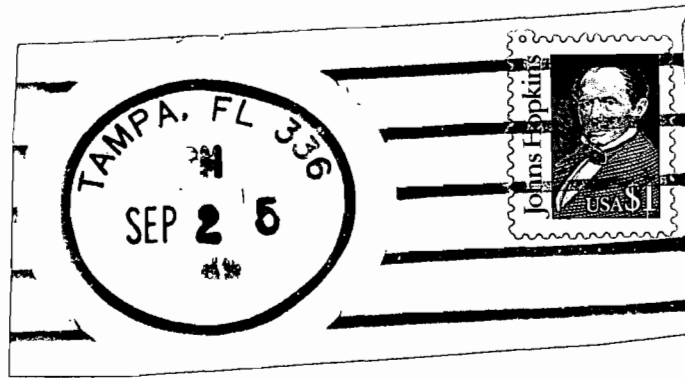
**Re: Sulphur Terminals Company, Inc., Tampa Facility - Sulphur
Facility Permitting, AC29-167678**

Dear Mr. Fancy:

This letter is written on behalf of Sulphur Terminals Co., Inc., ("STI"), a client of this office to respond to your letter of August 18, 1989, requesting additional information to assist the Department in the processing of the air permit for STI's Tampa sulphur facility. In response to your request for additional information STI submits the following:

DER Request 1: Please submit to the Hillsborough County Environmental Protection Commission ("HCEPC") the appropriate permit fee of \$365.00

Attachment "A", copy of the transmittal letter, reflects the permit fee, as well as copies of this additional information have been provided to HCEPC.



PEEPLER, EARL & BLANK

ATTORNEYS AT LAW
1800 2ND STREET
SUITE 888
SARASOTA, FLORIDA 34236

TO

Claire H. Fancy, Deputy Chief
Aire Resource Management
Fla. Dept. of Environmental Reg.
2600 Blair Stone Road
Tallahassee, Florida 34399-2400

DER Request 2: What has been the maximum (permitted or actual) sulphur throughput at this facility? What was the molten sulphur throughput during two consecutive representative years in the last five (5) year period?

The historical data with regard to sulphur throughput at this facility reflects operation annual throughput of 2.5MM tons per year. These are estimates based on operational experience and available records and are believed by STI to be representative based on twenty (20) years of operation. As the Department is aware, these facilities were not permitted because no permits were required until the adoption of the recent Sulphur Rule. This information is submitted as part of bringing these existing facilities within the regulatory framework established under that rule.

DER Request 3: Please submit air emission estimates for any other source/equipment/process within (or associated with) the sulphur facility which has not yet been permitted by DER.

There are no other sources, equipment or processes, other than those set out in the original permit application.

DER Request 4: Provide the physical dimensions of the sulphur storage tanks.

See Attachment "B".

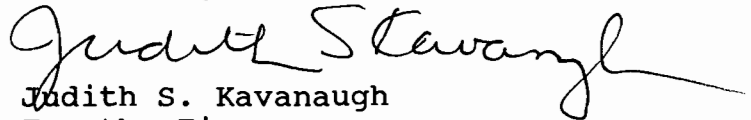
DER Request 5: Please complete Section 1B, P.E. Requirement for the application you have submitted.

As DER is aware, this facility is already constructed and uses no pollution control equipment. Thus the P.E. certification as to pollution control equipment or facilities is not applicable. STI is in the process of obtaining certification by a Florida P.E. certifying that the facility is constructed as represented in the permit application, and will provide that as soon as possible for purposes of emissions estimates.

Claire H. Fancy, Deputy Chief
September 25, 1989
Page 3

If you or your staff have any questions or any further information as required, please do not hesitate to contact me and I remain,

Sincerely,
PEEPLES, EARL & BLANK, P.A.


Judith S. Kavanaugh
For the Firm

JSK/jcs

cc: Mr. Pradeep Raval
Mr. William Thomas
Mr. Iwan Choronenko
Sulphur Terminals, Inc.

PEEPLES, EARL & BLANK

PROFESSIONAL ASSOCIATION

ATTORNEYS AT LAW

1800 2ND STREET

SUITE 888

SARASOTA, FLORIDA 34236

TELEPHONE (813) 366-1180

TELEFAX (813) 366-1183

MIAMI OFFICE

ONE BISCAYNE TOWER, SUITE 3636

TWO SOUTH BISCAYNE BOULEVARD

MIAMI, FLORIDA 33131

(305) 358-3000

FAX (305) 358-5079

JUDITH S. KAVANAUGH

REPLY TO:

Sarasota

September 25, 1989

Iwan Choronenko, Deputy Director
Air Department
HILLSBOROUGH COUNTY ENVIRONMENTAL
PROTECTION COMMISSION
1900 Ninth Avenue
Tampa, Florida 33605

Re: Sulphur Terminals Company, Inc., Tampa Florida - Sulphur
Facility Permitting, AC29-167678

Dear Mr. Choronenko:

Enclosed please find the permit processing fee in the amount of three hundred and sixty-five dollars (\$365.00) for the County's review of the above-described facility. Also enclosed is a copy of the additional information provided to the Florida Department of Environmental Regulation with regard to this permit application.

I you or your staff have any questions about the permit application or require any further information, please do not hesitate to call me. I thank you for your assistance in this regard and I remain,

Sincerely,
PEEPLES, EARL & BLANK, P.A.



Judith S. Kavanaugh
For the Firm

JSK/jcs

cc: Mr. C.H. Fancy
Mr. William Thomas

Sulphur Terminals Co., Inc.
Tampa, Florida

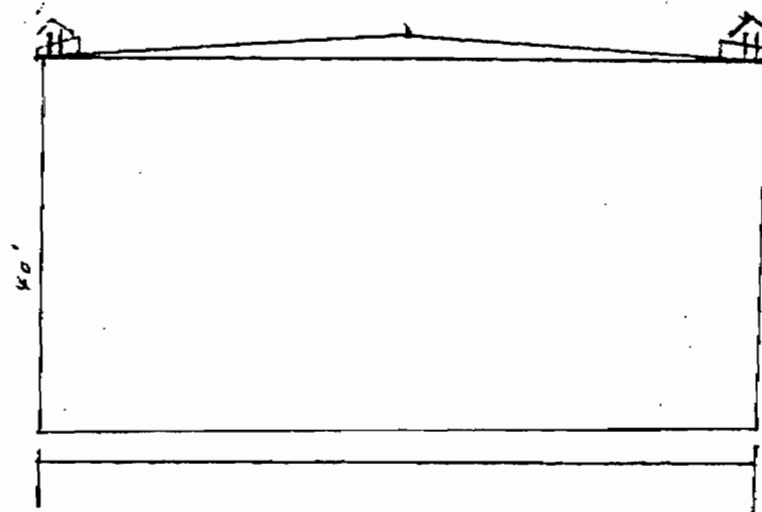
Total number sulphur tanks - 8

Six 10,000 Gt. Tanks 81 Ft. Dia.

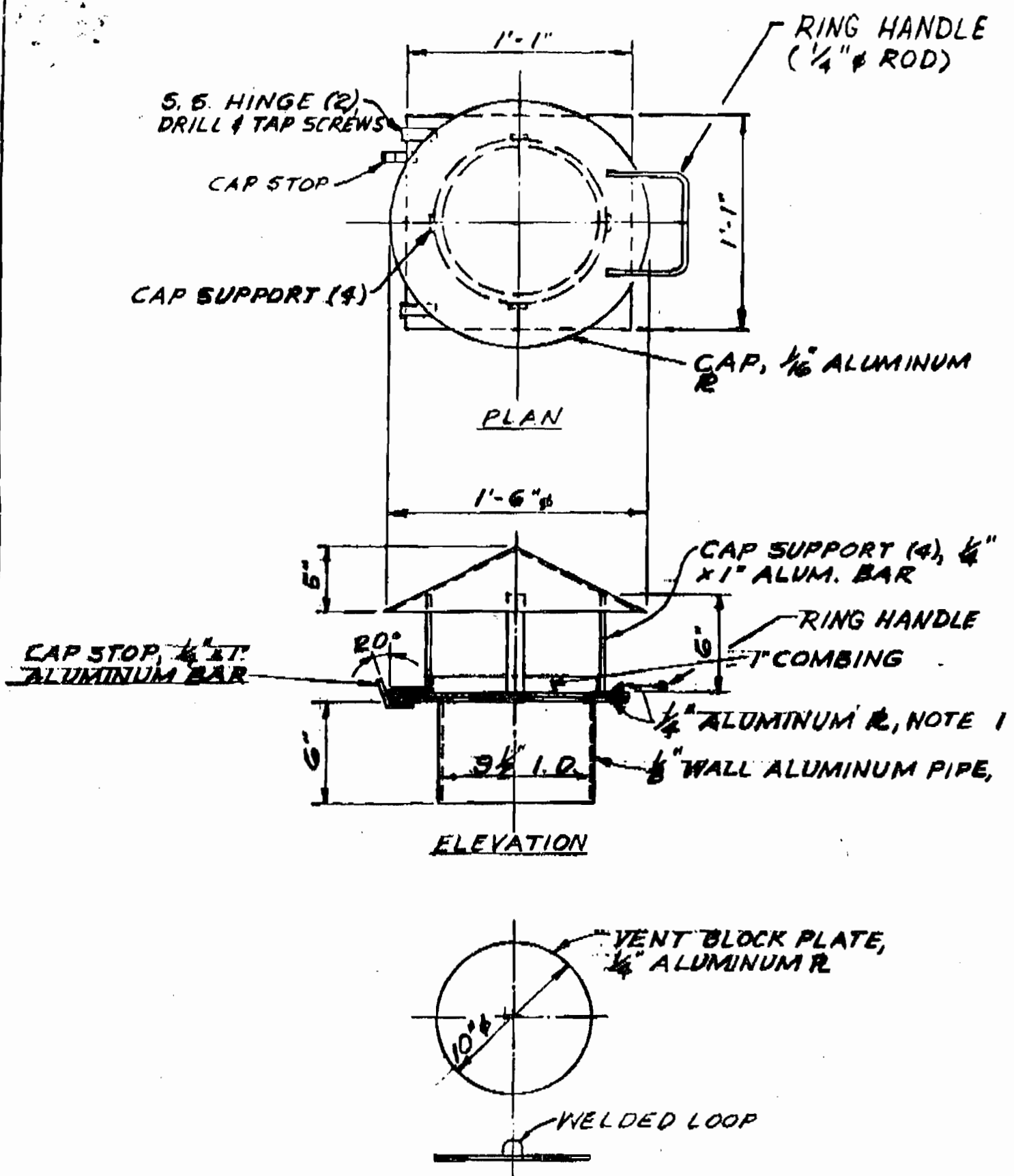
Two 15,000 Gt. Tanks 99 Ft. Dia.

All tanks 40 ft. height

Two 10 Inch vents open on each tank.



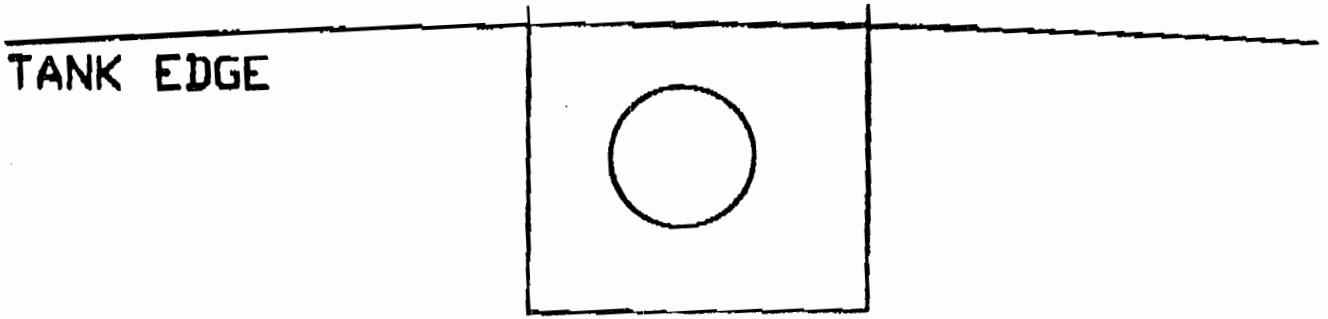
ATTACHMENT "B"



NOTE 1 - LOWER PLATE HAS 9 1/2" HOLE, UPPER PLATE HAS 10 1/2" HOLE

PROPOSED VENT CAP DESIGN FOR STI

VENT UNDER NORMAL OPERATION



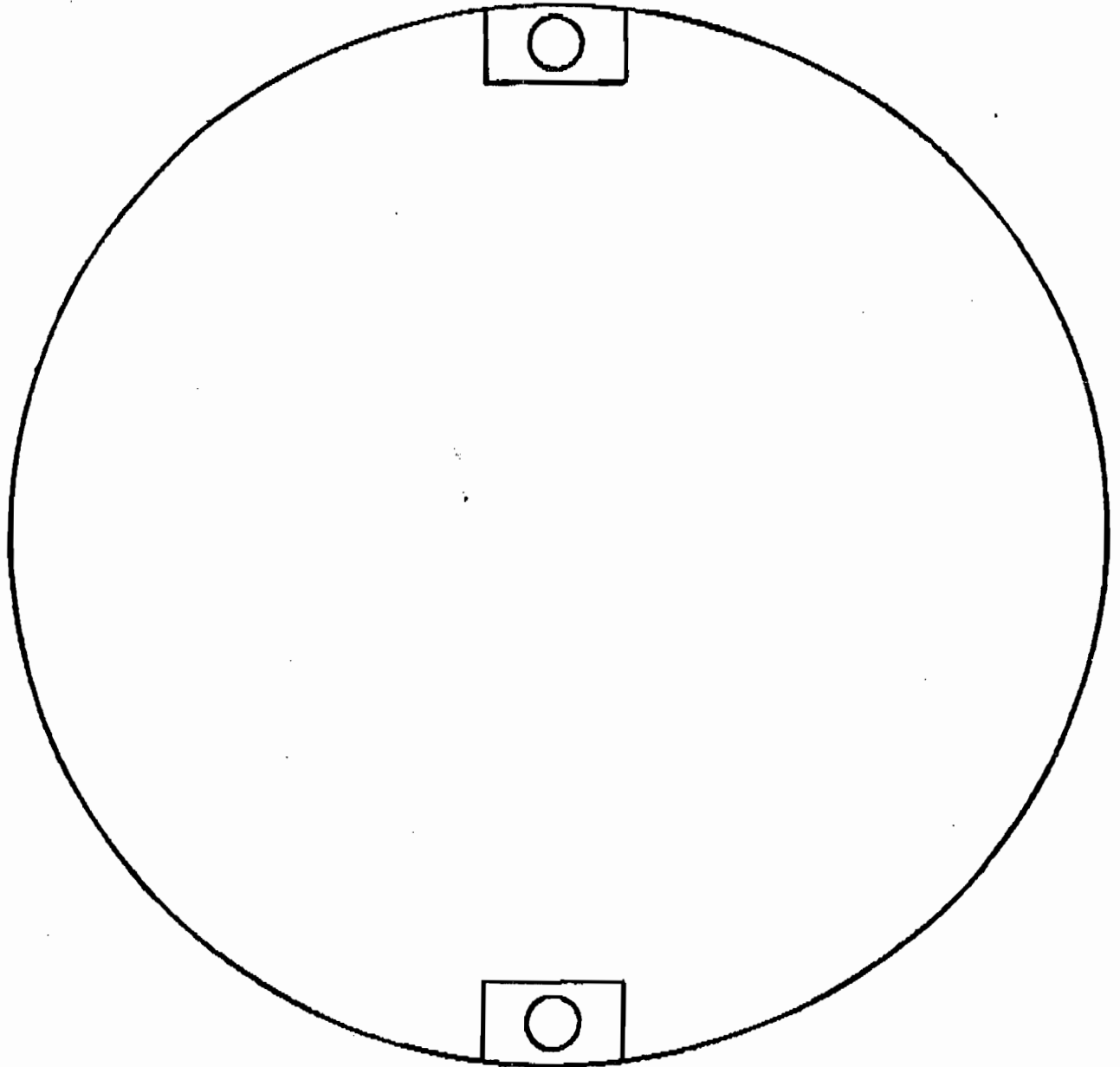
TOP VIEW



TANK EDGE

CUTAWAY SIDE VIEW

DRIP PAN EXTENSION DATA SHEET



MARK WIND DIRECTION AND THE EXHAUSTING VENT

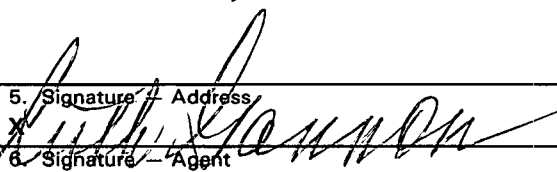
APPROXIMATE WIND SPEED _____ mph

DATE _____

*Two 10" Vents (Open) per Tank
Fourteen 10" Vents closed*

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. J. W. Moon, Jr. Sulphur Terminals Company, Inc. 835 Union Street New Orleans, LA 70112	4. Article Number P 938 762 653
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee 	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 8/21/89	

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

P 938 762 653

RECEIPT FOR CERTIFIED MAIL

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

Sent to	
Mr. J. W. Moon, Jr., Sulphur	
Street and No. Terminals, Inc.	
835 Union St.	
P.O., State and ZIP Code	
New Orleans, LA 70112	
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: 8-18-89	
Permit: AC 29-167678	

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 Twachtman, Secretary

John Shearer, Assistant Secretary

August 18, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. W. Moon, Jr.
Sulphur Terminals Company, Inc.
835 Union Street
New Orleans, LA 70112

Dear Mr. Moon:

Re: STI - Tampa Sulfur Facility Permitting, AC 29-167678

The Department has received your application dated July 20, 1989, and deemed it incomplete. Please submit the following information including all assumptions, calculations and reference material:

1. Please submit to the Hillsborough County Environmental Protection Commission (HCEPC) the appropriate permit fee of \$365.00.
2. What has been the maximum (permitted or actual) sulfur throughput at this facility? What was the molten sulfur throughput during two consecutive representative years in the last five year period?
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. Provide the physical dimensions of the sulfur storage tanks.
5. Please complete Section 1.B., P.E. requirement, for the application you have submitted.

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

CHF/PR

cc: B. Thomas, SW District
I. Choronenko, HCEPC
J. Kavanaugh; Peeples, Earl and Blank

PEEPLS, EARL & BLANK
PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

RECEIVED
DER - MAIL ROOM
1989 JUL 20 AM 10:41

WILLIAM L. EARL
ROBERT H. BLANK
JUDITH S. KAVANAUGH
DENNIS M. STOFFS
THOMAS T. ANKERSEN
T. MOTHY H. CRUTCHFIELD
LAWRENCE E. MARGOLIS
KATHLEEN D. KIRWIN

1800 2ND STREET
SUITE 888
SARASOTA, FLORIDA 34236
TELEPHONE (813) 366-1180
TELEFAX (813) 366-1183

L. GRANT PEEPLES
OF COUNSEL

REPLY TO:

July 19, 1989

SARASOTA

Mr. Pradeep Raval
Air Resources Management
Department of Environmental Resources
2600 Blair Stone Road
Tallahassee, Florida 34399-2400

**RE: Sulphur Terminals Company, Inc., Bulk Liquid Sulphur Terminal;
Tampa, Florida**

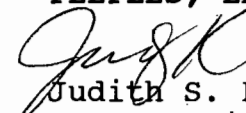
Dear Mr. Raval:

Enclosed please find an original and three (3) copies of a permit application package for the above-described facility. The permit application is submitted on behalf of Sulphur Terminals Company, Inc., as requested by the Department of Environmental Regulation. A check in the amount of \$1000.00 is also enclosed for the permit application fee as required by Chapter 17-4, Florida Administrative Code.

If there are any questions, or any additional information is needed, please contact me. Sulphur Terminals Company, Inc. appreciates the Department's efforts and cooperation in accomplishing the permitting of its facilities pursuant to the sulphur rule.

Sincerely,

PEEPLS, EARL AND BLANK, P.A.


Judith S. Kavanaugh
For the Firm

JSK/jcs
Enc.

cc: Sulphur Terminals, Inc.

RECEIVED
JUL 20 1989
DER-BAQM

PEEPLES, EARL & BLANK, P.A.
 OFFICE ACCOUNT
 TWO SOUTH BISCAYNE BLVD.
 3636 ONE BISCAYNE TOWER
 MIAMI, FLORIDA 33131-1853

BEST AVAILABLE COPY

NCNB-NATIONAL BANK OF FLORIDA
 MAIN OFFICE
 MIAMI, FLORIDA 33131
 63-1121/660

0009707

Check No.

July 18, 1989
 DATE

\$1,000.00
 AMOUNT

PAY ***One Thousand Dollars and no/100***
TO THE ORDER OF Florida Department of Environmental Regulation

PEEPLES, EARL & BLANK, P.A.
 OFFICE ACCOUNT

R.A. Beaul

Mr. Pradeep Raval
 Air Resources Management

FEDERAL EXPRESS

AIRBILL

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
 USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
 QUESTIONS? CALL 800-234-5355 TOLL FREE.

PACKAGE TRACKING NUMBER

4003650895

4003650895

RECIPIENT'S COPY

From (Your Name) Please Print J. Kavanaugh		Your Phone Number (Very Important) (813) 366-1180		To (Recipient's Name) Please Print Mr. Pradeep Raval		Recipient's Phone Number (Very Important) 	
Company PEEPLES, EARL & BLANK		Department/Floor No. 		Company Air Resources Management / DER		Department/Floor No. 	
Street Address 2000 SECOND ST STE 008				Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.) 2600 Blair Stone Road			
City SARASOTA		State FL		City Tallahassee		State FL	
ZIP Required 34236		ZIP Required 34299		ZIP Required 24100			

YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)
3410

IF HOLD FOR PICK-UP, Print FEDEX Address Here

PAYMENT Bill Sender Bill Recipient's FedEx Acct. No. Bill 3rd Party FedEx Acct. No. Bill Credit Card
 Cash

Street Address
 City
 State
 ZIP Required

SERVICES		DELIVERY AND SPECIAL HANDLING				PACKAGES	WEIGHT IN POUNDS ONLY	YOUR DECLARED VALUE	OVER SIZE	
1 <input type="checkbox"/> PRIORITY 1 Overnight Delivery	6 <input checked="" type="checkbox"/> OVERNIGHT LETTER*	1 <input type="checkbox"/> HOLD FOR PICK-UP (Fill in Box H)	2 <input checked="" type="checkbox"/> DELIVER WEEKDAY	3 <input type="checkbox"/> DELIVER SATURDAY (Extra charge)	4 <input type="checkbox"/> DANGEROUS GOODS (Extra charge)	5 <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Release Signature Not Applicable)	6 <input type="checkbox"/> DRY ICE Lbs	7 <input type="checkbox"/> OTHER SPECIAL SERVICE	8 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge)	9 <input type="checkbox"/> HOLIDAY DELIVERY (If offered) (Extra charge)
2 <input type="checkbox"/> COURIER-PAK OVERNIGHT ENVELOPE*	7 <input type="checkbox"/>	Total		Total	Total	Total	Received At 1 <input type="checkbox"/> Regular Stop 2 <input type="checkbox"/> On-Call Stop 3 <input type="checkbox"/> Drop Box 4 <input type="checkbox"/> B.S.C. 5 <input type="checkbox"/> Station			
3 <input type="checkbox"/> OVERNIGHT BOX	8 <input type="checkbox"/>	Total		Total	Total	Total	FEDEX Corp. Employee No.			
4 <input type="checkbox"/> OVERNIGHT TUBE	9 <input type="checkbox"/>	Total		Total	Total	Total	Date/Time for FEDEX Use			
5 <input type="checkbox"/> STANDARD AIR Delivery not later than second business day	10 <input type="checkbox"/>	Total		Total	Total	Total	Date/Time Received FedEx Employee Number			
* Declared Value Limit \$100.		Total		Total	Total	Total	Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.			

PART #111800
 REVISION DATE 10/88
 PRINTED IN U.S.A. FXEM
 PROD. 2/85
009
 © 1988 F.E.C.

Enc.
 cc: Sulphur Terminals, Inc.

10331

DEPARTMENT OF ENVIRONMENTAL REGULATION Recpt. # 117639



RECEIVED

BOB GRAHAM GOVERNOR

JUL 20 1989 VICTORIA J. TSCHINKEL SECRETARY

DER-BAQM RICHARD D. GARRITY, PH.D. DISTRICT MANAGER

SOUTHWEST DISTRICT

7801 HIGHWAY 301 NORTH TAMPA, FLORIDA 33610-9544

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Molten Sulphur Storage and Handling Facility. [] New [X] Existing Existing minor source
APPLICATION TYPE: [X] Construction [X] Operation [] Modification

COMPANY NAME: Sulphur Terminals Company, Inc. COUNTY: Hillsborough

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) 8 storage tanks, truck loading, ship unloading

SOURCE LOCATION: Port of Tampa City Tampa

UTM: East 358.0 North 3090.0

Latitude 27° 58' 05" N Longitude 82° 38' 03" W

APPLICANT NAME AND TITLE: Sulphur Terminals Company, Inc.

APPLICANT ADDRESS: 835 Union Street, New Orleans, LA 70112

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Sulphur Terminals Co., Inc

I certify that the statements made in this application for a Air Construction/Operation 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: [Signature] John W. Moon, Jr. Vice-Pres.-Operations Name and Title (Please Type)

Date: 7/19/89 Telephone No. (504) 581-2424

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

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

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

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

Signed _____

Name (Please Type)

Company Name (Please Type)

Mailing Address (Please Type)

Florida Registration No. _____ Date: _____ Telephone No. _____

SECTION II: GENERAL PROJECT INFORMATION

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

See Attachment A and B

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

Start of Constructi N.A. Existing Source Completion of Construction N.A. Existing Source

- 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.)

N.A.

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

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;
if power plant, hrs/yr _____ ; if seasonal, describes _____

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

1. Is this source in a non-attainment area for a particular pollutant? _____
 - 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. _____
3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. _____
4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? _____
5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? _____

H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? No. Existing Minor Source. _____

- 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:

SEE ATTACHMENTS A and B

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

Bulk liquid storage.

B. Process Rate, if applicable: (See Section V, Item 1) N.A. No process involved.

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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

SEE ATTACHMENT B

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

¹See Section V, Item 2.

²Reference 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)

³Calculated from operating rate and applicable standard.

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

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

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 N.A.

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 _____ N.A.

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

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

Stack Height: _____ ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

N.A.

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 (lb/hr)							

Description of Waste _____
 Total Weight Incinerated (lb/hr) _____ Design Capacity (lb/hr) _____
 Approximate Number of Hours of Operation per day _____ day/wk _____ wke/yr. _____
 Manufacturer _____
 Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack 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 devices: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: N.A.

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

N.A.

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

SEE ATTACHMENTS A - D

Please provide the following supplements where required for this application.

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

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 Lives:

6. Operating Costs:

7. Energy:

8. Maintenance Costs:

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:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy 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 Devices:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Devices:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Devices:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant 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 N.A.

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ 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. Applicant's Maximum Allowable Emission Data

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

PROJECT DESCRIPTION

The STI facility in Tampa is an existing bulk liquid sulphur storage and handling terminal, which has been operating since its construction over 25 years ago. The facility is located on Hooker's Point at Port of Tampa, and encompasses approximately 11.34 acres. The terminal facility consists of eight (8) storage tanks: six 10,000 ton tanks and two 15,000 ton tanks, with appurtenant enclosed pipeline systems for offloading of liquid sulphur from ships, and loading liquid sulphur into tank trucks. The facility was designed and has been used since its construction for bulk liquid storage and handling of elemental sulphur. No processing or manufacturing of any type is conducted at the terminal.

The sulphur is maintained in its liquid, or molten state, by steam generated by two boilers. The boilers burn fuel oil or natural gas and are permitted air sources under DER Permit No. #A029-71654. Until 1985, there were no standards applicable to or permits required for the sulphur tank farm. In 1985, the Florida Environmental Regulation Commission adopted 17-2.600(11), which imposes new standards for the sulphur storage and handling facilities. In November of 1988, the DER noticed the existing sulphur industry of the need to apply for permits under the new rule, and established a schedule for the permitting of the existing industry. This permit application is filed pursuant to DER's request that all existing facilities submit permit applications to demonstrate compliance with the sulphur rule.

ATTACHMENT "A"

PARTICULATE EMISSION ESTIMATES FOR THE
SULFURIC ACID TRADING COMPANY TAMPA
BULK LIQUID SULFUR AND SULFURIC ACID STORAGE FACILITY

Submitted on behalf of:
SULPHUR TERMINALS COMPANY, INC.

June 12, 1989
Ref. No. 51-2116-471

1. INTRODUCTION

On February 27, 1985, the Florida Environmental Regulation Commission adopted amendments to Chapter 17-2, Florida Administrative Code which regulates the storage and handling of elemental sulfur in the State of Florida. These amendments, known as the Sulfur Storage and Handling Rule (or "sulfur rule"), established new standards for liquid (molten) sulfur storage facilities. The Florida Department of Environmental Regulation (DER) is now in the process of implementing the sulfur rule through permitting of the existing liquid sulfur storage facilities.

This report summarizes the particulate emission calculations in support of permit applications for the Sulfuric Acid Trading Company (SATCO) facility in Tampa. This facility stores and handles molten elemental sulfur and sulfuric acid (H_2SO_4). Pertinent information on elemental sulfur and H_2SO_4 annual throughputs for this facility, as well as information on storage tank capacities and vent configurations, is contained in Table 1-1.

Emission calculations for elemental sulfur storage were primarily based on a series of monitoring studies carried out over the past four and one-half years at the STI and Pennzoil Tampa molten sulfur facilities^{(1), (2), (3)}. The test results have been submitted to DER. In these studies storage tank ventilation rates and particulate emission rates were measured over a range of meteorological conditions; storage tank capacities, liquid levels, and vent configurations; and sulfur product characteristics. This work included the development and testing of a sulfur-specific sampling procedure for accurate measurement of sulfur particulate emission rates⁽³⁾. This alternate sampling method was necessary

because of the unique conditions and tank design at the STI facility which interfered with accurate measurements using standard reference methods. The sulfur-specific method was approved by DER in March, 1989. Total particulate concentrations in the STI vent gases were measured using DER Method 5. Concentrations of PM-10 were based on the measured total particulate concentrations and particle size distribution measurements (performed by microscopic analysis of filter samples, described in reference (1)) indicating PM-10 to be 88.18% of total particulate.

The above vent flow and pollutant concentration measurements made at the STI and Pennzoil Tampa facilities are applicable to the SATCO facility. The vent configuration of the SATCO storage tanks is similar to that tested at the STI facility. The sulfur stored at the SATCO terminal is the same as that stored at the STI facility, which suggests that the equilibrium pollutant concentrations measured at the STI facility will apply to the SATCO facility for elemental sulfur storage.

There were no pollutant emission measurement data for H_2SO_4 storage at the SATCO facility upon which to base emission calculations. In this case engineering judgement involving theoretical calculations of upper limit pollutant emissions was applied.

The emission estimates for this facility are based on a maximum expected annual throughput and worst-case operating conditions, leading to upper limit estimates of maximum hourly and annual emissions.

TABLE 1-1: FACILITY INFORMATION ON MOLTEN SULFUR AND SULFURIC ACID STORAGE AND HANDLING AT THE SATCO TAMPA FACILITY

<u>Annual Throughput</u> (LT)	<u>No. of Storage Tanks</u>	<u>Storage Capacity Per Tank</u> (LT)	<u>No./Type of Vents Per Tank</u>	<u>Vent Diameter</u> (ft)
2.0 x 10 ⁶ (molten sulfur or sulfuric acid)	3	20,000	7 perimeter 6 1 centre <hr/> 7	0.5

Note to Table 1-1:

Either molten sulfur or sulfuric acid may be stored at the SATCO facility.

2. EMISSION CALCULATIONS FOR THE SULFURIC ACID TRADING COMPANY (SATCO), TAMPA FACILITY

This facility will be used for either the storage of molten sulfur or the storage of sulfuric acid (H_2SO_4). Emissions of sulfur particulate (SP), PM-10, and total particulate (TP) will occur from the storage and handling of molten sulfur at this facility. The storage of H_2SO_4 will result in the emissions of H_2SO_4 . There are three major types of emission sources:

- 1) Emissions from three storage tanks during filling and non-filling periods
- 2) Emissions from the ship during storage tank filling
- 3) Emissions due to truck filling from the storage tanks

2.1 BACKGROUND INFORMATION

2.1.1 Annual Throughput of Molten Sulfur/ H_2SO_4

2×10^6 LT/yr, maximum permitted throughput for facility of either molten sulfur or H_2SO_4 (6.667×10^5 LT/yr per storage tank)

2.1.2 Sulfur/ H_2SO_4 Transfer Rates

2.1.2.1 Ship to Storage Tank

600.0 LT/hr per storage tank, based on average ship discharge rates presented in reference (1).

2.1.2.2 Storage Tanks to Trucks

Maximum of 264 LT/hr, based on the filling of 6 trucks/hr at each of 2 truck-filling stations, each truck having a 22.0 LT capacity.

2.1.3 Storage Tank Ventilation Rate

Estimated at 207 acfm, based on 35 measurements at the STI Tampa facility in September, 1987 and linear scaling to account for the increased vent area on the SATCO tanks compared to the STI tanks.

2.1.4 Ship Tank Ventilation Rate

51.8 acfm for each of 5 ship tanks, based on estimates described in reference (1).

* 2.1.5 Concentrations of Pollutants in Vapor Space Above Molten Sulfur and H₂SO₄

Based on particulate concentration measurements at the STI Tampa facility, SP, PM-10, and TP are assumed to be in equilibrium with molten sulfur (i.e., independent of tank ventilation rate) at the following concentrations:

Pollutant	Concentration (lb/ft ³)
SP	1.757 x 10 ⁻⁵
PM-10	3.750 x 10 ⁻⁵
TP	4.250 x 10 ⁻⁵

For the storage of 97% H₂SO₄ at ambient temperature

(25°C), theory predicts a saturation vapor pressure of H_2SO_4 of 4.4×10^{-4} mm Hg, which is equivalent to a vapor space concentration of 1.449×10^{-7} lb/ft³.

2.2 EMISSION CALCULATIONS

2.2.1 Emissions from Storage Tanks During Filling

Period of filling per tank:

$$(6.667 \times 10^5 \text{ LT/yr}) / (600.0 \text{ LT/hr}) = 1,111 \text{ hr/yr}$$

Rate of vapor displacement due to tank filling:

$$(600.0 \text{ LT/hr}) (2240 \text{ lb/LT}) / (112 \text{ lb S/ft}^3) = 12,000 \text{ ft}^3/\text{hr}$$

Total effective tank ventilation rate during filling:

$$12,000 + (207) (60 \text{ min/hr}) = 24,420 \text{ ft}^3/\text{hr}$$

Maximum hourly emission rates per tank during filling are computed as the total effective ventilation rate (ft^3/hr) times the pollutant concentration (lb/ft^3). For molten sulfur storage:

$$(24,420) (1.757 \times 10^{-5}) = 0.45 \text{ lb/hr SP}$$

$$(24,420) (3.750 \times 10^{-5}) = 0.92 \text{ lb/hr PM-10}$$

$$(24,420) (4.250 \times 10^{-5}) = 1.04 \text{ lb/hr TP}$$

For H_2SO_4 storage:

$$(24,420) (1.449 \times 10^{-7}) = 0.004 \text{ lb/hr H}_2\text{SO}_4$$

These are the maximum hourly emissions expected from the storage tank at any time.

Annual emissions from tank filling are computed as the hourly emissions times the period of filling per tank. For molten sulfur storage:

0.43 (1111) = 477 lb/yr = 0.24 ton/yr SP
 0.92 (1111) = 1022 lb/yr = 0.51 ton/yr PM-10
 1.04 (1111) = 1155 lb/yr = 0.58 ton/yr TP

For H₂SO₄ storage:

0.004 (1111) = 4 lb/yr = 0.002 ton/yr H₂SO₄

2.2.2 Emissions from Storage Tanks During Non-Filling

Period of non-filling per tank = 8760 - 1111 = 7649
 hr/yr.

Annual emissions per tank are calculated as the tank ventilation rate during non-filling periods, i.e., (207 acfm) (60 min/hr) (7649 hr/yr) = 9.500 x 10⁷ ft³/yr, times the pollutant concentration. For molten sulfur storage:

(9.500 x 10⁷) (1.757 x 10⁻⁵) = 1,669 lb/yr = 0.83 ton/yr SP
 (9.500 x 10⁷) (3.750 x 10⁻⁵) = 3,563 lb/yr = 1.78 ton/yr PM-10
 (9.500 x 10⁷) (4.250 x 10⁻⁵) = 4,038 lb/yr = 2.02 ton/yr TP

For H₂SO₄ storage:

(9.500 x 10⁷) (1.449 x 10⁻⁷) = 14 lb/yr = 0.007 ton/yr H₂SO₄

2.2.3 Total Annual Emissions from Storage Tanks

Total annual emissions per tank are computed as the sum of emissions during filling and emissions during non-filling. For molten sulfur storage:

$$0.24 + 0.83 = 1.07 \text{ ton/yr SP}$$

$$0.51 + 1.78 = 2.29 \text{ ton/yr PM-10}$$

$$0.58 + 2.02 = 2.60 \text{ ton/yr TP}$$

For H_2SO_4 storage:

$$0.002 + 0.007 = 0.009 \text{ ton/yr } \text{H}_2\text{SO}_4$$

2.2.4 Emissions from the Ship During Storage Tank Filling

Maximum hourly emissions are computed as the total ship tank ventilation rate, i.e., (51.8 acfm/tank) (5 tanks) (60 min/hr) = 15,540 ft^3/hr , times the pollutant concentrations. For molten sulfur storage:

$$15,540 (1.757 \times 10^{-5}) = 0.27 \text{ lb/hr SP}$$

$$15,540 (3.750 \times 10^{-5}) = 0.58 \text{ lb/hr PM-10}$$

$$15,540 (4.250 \times 10^{-5}) = 0.66 \text{ lb/hr TP}$$

For H_2SO_4 storage:

$$15,540 (1.449 \times 10^{-7}) = 0.002 \text{ lb/hr } \text{H}_2\text{SO}_4$$

Annual emissions are computed as the hourly emission rate times the number of hours per year of tank filling. The number of hours of filling is equal to:

(1111 hr/yr/tank) (3 tanks)/(on average, 1.5 tanks filled at once) = 2222 hr/yr. For molten sulfur storage:

$$2222 (0.27) = 600 \text{ lb/yr} = 0.30 \text{ ton/yr SP}$$

$$2222 (0.58) = 1,289 \text{ lb/yr} = 0.64 \text{ ton/yr PM-10}$$

$$2222 (0.66) = 1,467 \text{ lb/yr} = 0.73 \text{ ton/yr TP}$$

For H₂SO₄ storage:

$$2222 (0.002) = 4 \text{ lb/yr} = 0.002 \text{ ton/yr H}_2\text{SO}_4$$

2.2.5 Emissions from Truck Filling

Maximum hourly emissions are computed as the sulfur transfer rate from storage tanks to trucks, i.e., 264 LT/hr = 5,280 ft³/hr, times the pollutant concentrations. For molten sulfur storage:

$$\begin{aligned} 5,280 (1.757 \times 10^{-5}) &= 0.09 \text{ lb/hr SP} \\ 5,280 (3.750 \times 10^{-5}) &= 0.20 \text{ lb/hr PM-10} \\ 5,280 (4.250 \times 10^{-5}) &= 0.22 \text{ lb/hr TP} \end{aligned}$$

For H₂SO₄ storage:

$$5,280 (1.449 \times 10^{-7}) = 0.001 \text{ lb/hr H}_2\text{SO}_4$$

Annual emissions are computed as the annual facility-wide vapor displacement rate times the pollutant concentrations. The facility-wide vapor displacement rate is:

$$(2 \times 10^6 \text{ LT/yr}) (2240 \text{ lb/LT}) / (112 \text{ lb/ft}^3) = 4 \times 10^7 \text{ ft}^3/\text{yr}$$

For the storage of molten sulfur:

$$\begin{aligned} (4 \times 10^7) (1.757 \times 10^{-5}) &= 703 \text{ lb/yr} = 0.35 \text{ ton/yr SP} \\ (4 \times 10^7) (3.750 \times 10^{-5}) &= 1,500 \text{ lb/yr} = 0.75 \text{ ton/yr PM-10} \\ (4 \times 10^7) (4.250 \times 10^{-5}) &= 1,700 \text{ lb/yr} = 0.85 \text{ ton/yr TP} \end{aligned}$$

For H₂SO₄ storage:

$$(4 \times 10^7) (1.449 \times 10^{-7}) = 6 \text{ lb/yr} = 0.003 \text{ ton/yr H}_2\text{SO}_4$$

2.3 SUMMARY

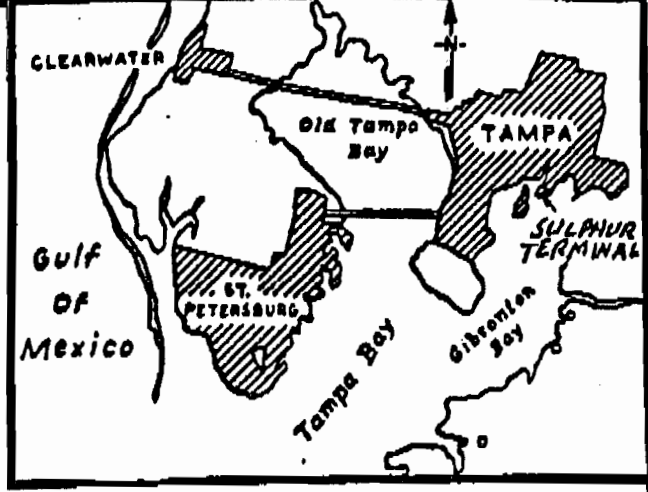
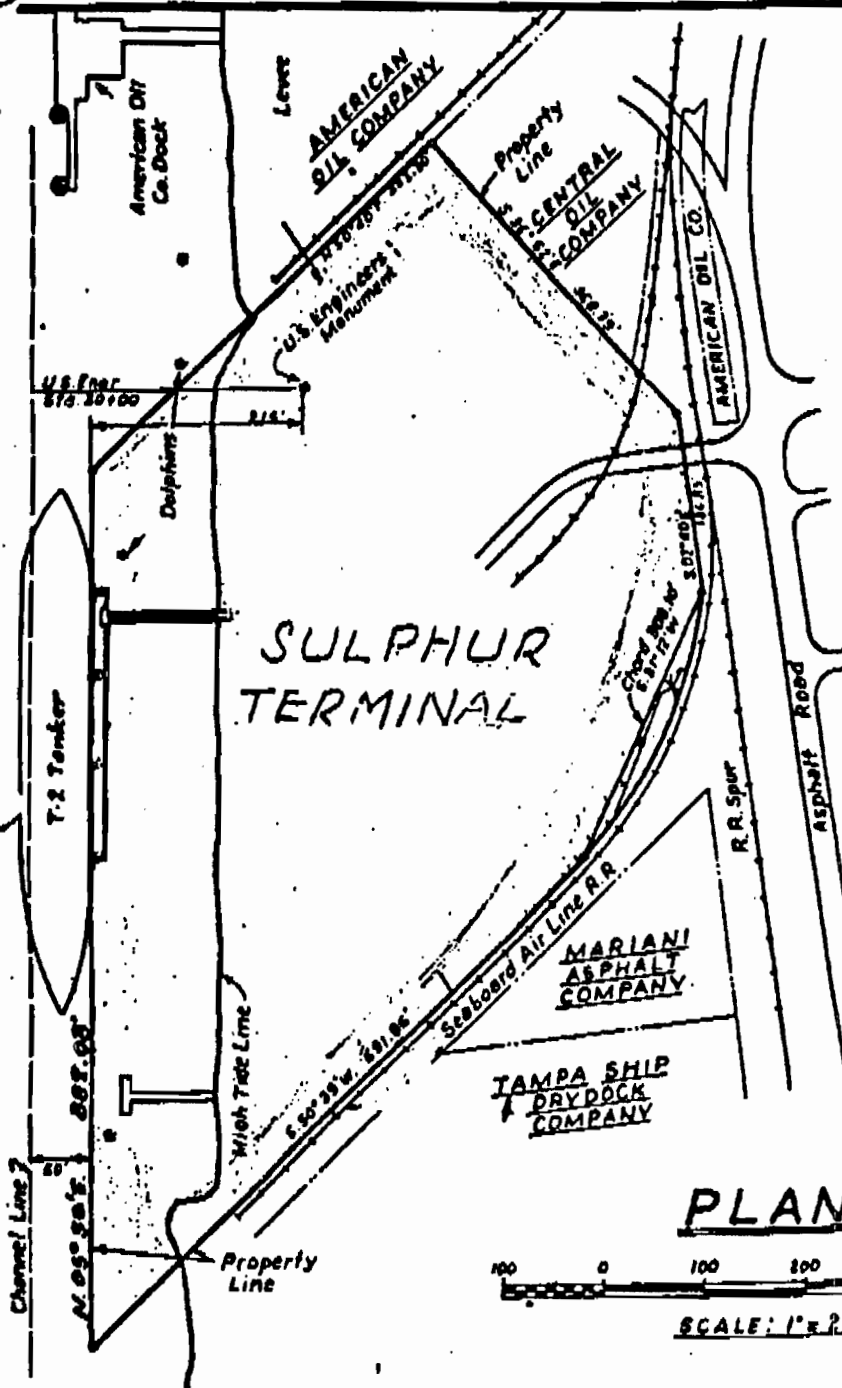
Maximum hourly and annual emissions of SP, PM-10, and TP (for molten sulfur storage) and H₂SO₄ (for H₂SO₄ storage) are summarized below:

<u>Contaminant</u>	<u>Source Type</u>						
	<u>Single</u>		<u>Ship</u>		<u>Truck Filling</u>		
	<u>Storage Tank</u>						
	<u>Max</u>	<u>Actual</u>	<u>Max</u>	<u>Actual</u>	<u>Max</u>	<u>Actual</u>	
<u>lb/hr</u>	<u>T/yr</u>	<u>lb/hr</u>	<u>T/yr</u>	<u>lb/hr</u>	<u>T/yr</u>	<u>lb/hr</u>	<u>T/yr</u>
<u>Molten S</u>							
SP	0.43	1.07	0.27	0.30	0.09	0.35	
PM-10	0.92	2.29	0.58	0.64	0.20	0.75	
TP	1.04	2.60	0.66	0.73	0.22	0.85	
<u>H₂SO₄</u>							
H ₂ SO ₄	0.004	0.01	0.002	0.002	0.001	0.003	

The above table indicates that, for molten sulfur storage, the SP and PM-10 emissions are roughly 41% and 88% of the TP emissions, respectively. The large (i.e., factor of 2.5) difference between TP and SP emissions is due to emissions of condensable oils. These condensable oils affect TP measurements with DER Method 5 but are excluded from SP measurements using the sulfur-specific sampling procedure.

REFERENCES

- (1) Enviroplan, Inc., Air Quality Impact of Existing Liquid Sulfur Storage and Handling Facilities in the Tampa Area, Ref. No. 2116-418, December 26, 1984.
- (2) Enviroplan, Inc., Sulfur Particulate Emission Measurement Project at the Pennzoil Terminals in Tampa, Florida, Ref. Nos. 4025-617, 4025-620, October, 1986.
- (3) Enviroplan, Inc., Technical Report Supporting Application to the Florida DER for an Alternate Sulfur Particulate Emissions Sampling Procedure, Ref. No. 51-2116-748, October 30, 1987.

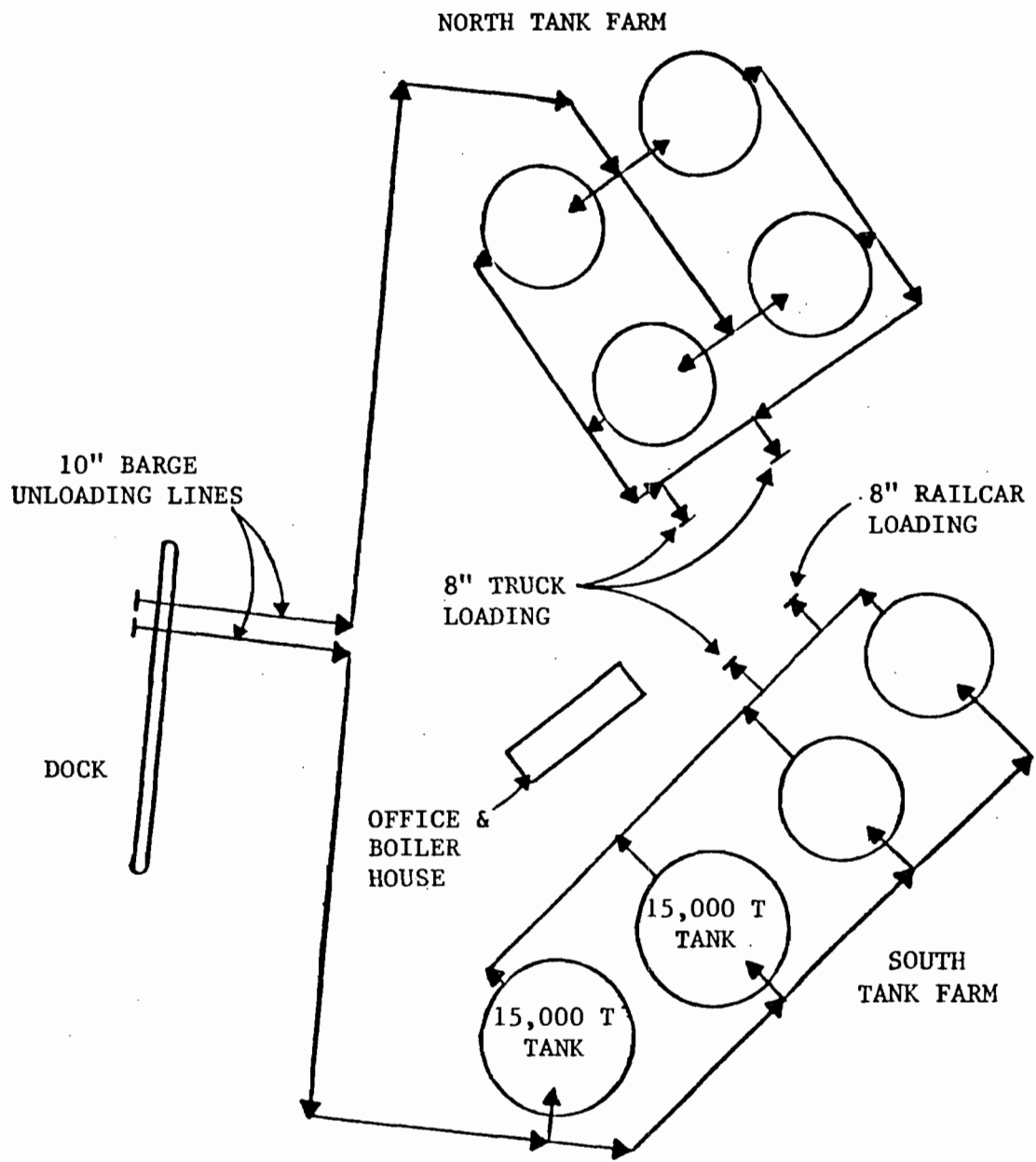


VICINITY MAP
SCALE OF MILES

PLAN

SCALE: 1" = 200'

SULPHUR TERMINALS COMPANY
LIQUID SULPHUR TERMINAL
LOCATION MAP



FLOW DIAGRAM
SULPHUR TERMINALS INC.
TAMPA, FLORIDA

NOTES

1. DETAILS OF TANK VENT LOCATIONS AND CONFIGURATIONS ARE PROVIDED ON OTHER ATTACHMENTS.
2. THE STORAGE CAPACITY OF ALL TANKS NOT OTHERWISE NOTED IS 10,000 LONG TONS OF SULPHUR.

