P 274 007 662

RECEIPT FOR CERTIFIED MAIL

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

Sent to W.T. Whale CSX TRANSPORTATION	
Street and No. 3701 Causeway Boulevard	
P.O., State and ZIP Code Tompa, FL 33619	
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: 10/21/87 Permit: AC 29-129122	

PS Form 3800, June 1985 ☆ U.S.G.P.O. 1985-480-794

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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

3. Article Addressed to: W.T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P 274 007 662

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

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery 10-23-87

8. Addressee's Address *(ONLY if requested and fee paid)*
3701 Causeway Blvd
Tampa FL 33619

DOMESTIC RETURN RECEIPT

file copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. W.T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

October 21, 1987

Enclosed is permit No. AC 29-129122 to replace an existing chute for loading of phosphate materials into shipholds with a Midwest International modular vessel loader, 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.
Deputy Chief
Bureau of Air Quality Management

Copy furnished to:

W. Thomas, SW Dist.
J. Campbell, EPCHC
F. Edmonds, P.E.

Final Determination

CSX Transportation
Hillsborough County

Midwest International MH72-4200TPH
Modular Vessel Loader Installation

Permit Number
AC 29-129122

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

October 14, 1987

Final Determination

The application by CSX Transportation to replace an existing phosphate materials shiploading chute with a Midwest International vessel loader has been reviewed by the Bureau of Air Quality Management. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, Hillsborough County, Florida. Public Notice of the Department's Intent to Issue the permit appeared in the Tampa Tribune on September 23, 1987.

Copies of the Technical Evaluation and Preliminary Determination have been available for public inspection at the Southwest District office in Tampa and at the Bureau of Air Quality Management office in Tallahassee.

One comment about the proposed permit was received from the Southwest District office. The commentor wanted to know if the provisions of Rule 17-2.610(3), FAC, could be applied to the project since there is an applicable standard in Rule 17-2.650(2)(c)11.b., FAC. The answer is yes. The standard in Rule 17-2.650(2)(c)11.b., FAC, applies to the actual handling, transfer, and loading of the phosphate materials. The provisions of Rule 17-2.610(3), FAC, apply to spills and accumulations of material that may result from the handling, transfer, and loading operations. Rule 17-2.650(2)(c)11.b. does not address these spills and accumulations.

The final action of the Department is the issuance of the permit without any changes.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

Permit Number: AC 29-129122
Expiration Date: December 31, 1987
County: Hillsborough
Latitude/Longitude: 27° 54' 50" N
82° 25' 20" W
Project: Midwest International Modular Vessel Loader Model MH72-4200TPH

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

The construction of a Midwest International modular vessel loader, Model MH72-4200TPH, with the capacity to load 4,200 tons per hour of phosphate materials into shipholds. The modular vessel loader is to replace the existing ship loading chute and the associated emission controls applied to the point of loading. The existing Baghouse No. 7 (Mikro-pulse 1100 J-10 TRH) will continue to control emissions from the Belt 9 to Belt 10 transfer point. The project is to be located at the CSX Transportation Rockport Terminal, Tampa, Hillsborough County, Florida.

The construction and operation shall be in accordance with the attached permit applications, plans, documents, and drawings except as noted in the Specific Conditions of this permit.

Attachments:

1. Application to Construct an Air Pollution Source, DER Form 17-1.202(1).
2. C. H. Fancy's letter dated March 12, 1987.
3. F. C. Edmond's letter dated June 11, 1987.
4. CSX Rockport Bulk Loadout Terminal Midwest Chokefeeder™ Installation.
5. Ron Pair's letter dated May 14, 1987.
6. F. C. Edmond's letter dated November 18, 1986.
7. Victor San Agustin's memorandum dated July 17, 1987.
8. Technical Evaluation and Preliminary Determination dated August 11, 1987.

PERMITTEE:
CSX Transportation

Permit Number: AC 29-129122
Expiration Date: December 31, 1987

GENERAL CONDITIONS:

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

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

GENERAL CONDITIONS:

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

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of creden tials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is loca ted or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

a. a description of and cause of non-compliance; and

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

GENERAL CONDITIONS:

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

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

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

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

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Phosphate rock shall not be loaded into any vessel at a rate in excess of 3,000 tons per hour and 52,800 tons per day. Diammonium phosphate, monoammonium phosphate, and granular triple superphosphate shall not be loaded into any vessel at a rate in excess of 2,000 tons per hour and 43,200 tons per day.

2. The total quantity of phosphate materials loaded into vessels shall not exceed 11,000,000 tons per rolling 12 month period. The duration of material transfer from the Belt 9 to Belt 10 transfer point and loading of material into vessels shall not exceed 5,500 hours per rolling 12 month period.

SPECIFIC CONDITIONS:

3. A calibrated device to continuously measure and record the hourly rate that phosphate materials are loaded into vessels shall be installed. The device and recorder shall be recalibrated at least annually.

4. Visible emissions at the point where material is being discharged into any vessel and from the modular filter exhaust shall not exceed 5% opacity (no visible emissions) as a 6-minute average.

5. The system used to cover vessel hatches and vent 25,900 dscfm of particulate laden gases to the No. 7 Baghouse shall be retained in good operating condition. This system shall either be reinstalled or equivalent measures (approved by the Department and the HCEPC) taken in the event emissions exceed the levels allowed by Specific Condition No. 4.

6. Particulate emissions from the No. 7 Baghouse shall not exceed 0.03 grain per dscf. Particulate mass emissions from the No. 7 Baghouse shall be limited to:

a. The maximum allowable emissions from the No. 7 Baghouse shall not exceed 3.2 pounds per hour and 14.02 tons per year when receiving gases from the Belt 9 to Belt 10 transfer point.

b. The maximum allowable emissions from the No. 7 Baghouse shall be 9.84 pounds per hour and 43.09 tons per year when receiving gases from the Belt 9 to Belt 10 transfer point and the point of discharge into any vessel.

7. The distance between the loading spout and the receiving surface shall not exceed 2 feet when phosphate material is being discharged into any vessel.

8. All reasonable precautions shall be taken to prevent and control the generation of unconfined particulate matter emissions resulting from the loading of phosphate materials. These precautions shall include, but not be limited to, the regular clean-up of dust accumulations around the traveling shiploader and on the ship deck, using procedures acceptable to the Department and the HCEPC.

9. This modification results in a particulate matter emission increase of 23 tons per year. This increase in emissions shall be contemporaneous with any increase associated with any future modification pursuant to Rule 17-2.510, FAC.

SPECIFIC CONDITIONS:

10. The Department has relied upon statements in the Engineer's letter of June 11, 1987; the equipment manufacturer's letter of May 14, 1987; and, the HCEPC's memorandum of July 17, 1987, in issuing this permit.

11. Compliance with Specific Condition Nos. 4 and 6 shall be demonstrated pursuant to all applicable provisions of Rule 17-2.700, FAC.

a. Initially, compliance with Specific Condition No. 4 shall be demonstrated prior to obtaining an operation permit and annually thereafter using EPA Method 9.

b. Initially, compliance with Specific Condition No. 6 shall be demonstrated prior to obtaining an operation permit and prior to obtaining a renewed operation permit thereafter using EPA Methods 1, 2, 4, and 5.

c. Alternatively, compliance with Specific Condition No. 6 may be demonstrated initially and annually thereafter by using EPA Methods 2 and 9 to demonstrate that visible emissions from the No. 7 Baghouse do not exceed 5% opacity (no visible emissions) as a 6-minute average. If the Department or the HCEPC has reason to believe the mass emission limitation in Specific Condition No. 6 is being exceeded--a mass emission test using EPA Methods 1, 2, 4, and 5 may be required.

d. Compliance with the 9.84 pounds per hour emission limit in Specific Condition No. 6.b. does not need to be demonstrated if emissions from the point of discharge to the ship hold have not been vented to the No. 7 Baghouse since the preceeding compliance test.

e. The Department's SW District office--Air Programs--and the HCEPC--Air Programs--shall be notified at least 15 days in advance of any compliance test.

f. Compliance test reports shall conform to the requirements of Rule 17-2.700(7), FAC, and shall be submitted to the Department's SW District office--Air Programs--and the HCEPC--Air Programs--within 45 days after completion of the test.

SPECIFIC CONDITIONS:

g. Phosphate rock shall be loaded into ships at 90% to 100% of the maximum permitted rate during any compliance test.

h. The initial compliance test shall be performed within 30 days after completion of construction.

12. An operation and maintenance plan acceptable to the Department and the HCEPC shall be developed by the applicant. This plan shall be submitted with the application for an operation permit. When approved, the plan shall become a condition of the operation permit.

13. After satisfactory completion of the initial compliance test and at least 90 days before the expiration date of this permit, a complete application for an operation permit shall be submitted to the Department's SW District office and the HCEPC. The permittee shall continue to operate in compliance with the terms and conditions of this construction permit until its expiration date or until the issuance of an operation permit.

Issued this 20 day of Oct, 1987

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

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

TO: Dale Twachtmann

THRU: Howard Rhodes

FROM: Clair Fancy

DATE: October 19, 1987

SUBJ: Approval of CSX Transportation
State Construction Permit Number: AC 29-129122

Attached for your approval and signature is a permit for the above mentioned company to replace an existing phosphate materials shiploading chute with a Midwest International vessel loader. The facility is located at 22nd Street Causeway and East Bay, Tampa, Hillsborough County, Florida. Comments were received during the public notice period.

Day 90 after which these permits will be issued by default is November 4, 1987.

The Bureau recommends approval and signature.

CHF/MJ/s

attachment

Howard R.

RECEIVED
OCT 20 1987
Office of the Secretary

→P 4/13

Check Sheet

Company Name: CSX Transportation
Permit Number: AC 29-129122
PSD Number:
County: Hillsborough
Permit Engineer:
Others involved:

Application:
- [x] Initial Application
- [ ] Incompleteness Letters
- [ ] Responses
- [ ] Final Application (if applicable)
- [ ] Waiver of Department Action
- [ ] Department Response

Intent:
- [x] Intent to Issue
- [x] Notice to Public
- [x] Technical Evaluation
- [ ] BACT Determination
- [x] Unsigned Permit

  Attachments:
  - [ ]
  - [ ]
  - [ ]

- [ ] Correspondence with:
  - [ ] EPA
  - [ ] Park Services
  - [ ] County
  - [ ] Other
- [x] Proof of Publication
- [ ] Petitions - (Related to extensions, hearings, etc.)

Final Determination:
- [x] Final Determination
- [x] Signed Permit
- [ ] BACT Determination

Post Permit Correspondence:
- [x] Extensions
- [x] Amendments/Modifications
- [ ] Response from EPA
- [ ] Response from County
- [ ] Response from Park Services

P 256 396 194

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. W. T. Whale, CSX Transportation	
Street and No. 3701 Causeway Blvd.	
P.O., State and ZIP Code Tampa, FL 33619	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 9-19-90 Permit: AC 29-129122	

PS Form 3800, June 1985

● **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. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Blvd.
Tampa, FL 33619

4. **Article Number**
P 256 396 194

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

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery 9-24

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

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

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

September 18, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

RE: Amendment of Modular Vessel Loader Air Construction Permit No. AC 29-129122

Dear Mr. Whale:

I have received Ms. E. J. LeBoss' letter of September 13, concerning the above referenced source. Air Construction permit No. AC 29-129122 was specifically issued for the construction of a Midwest International modular vessel loader Model MH72-4200TPH. The construction permit was not issued for the purpose of amending a previous air operation permit. As stated in my letter of August 27, the replacement of the subject Midwest International modular vessel loader will require the submission of an application for a new air construction permit signed and sealed by a professional engineer registered in Florida with the processing fee required by Chapter 17-4, F.A.C.

We will begin our review of your proposal when the application for an air construction permit is received. Please call Barry Andrews at (904) 488-1344, if you have any questions.

Sincerely,

James K. Pennington for

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

cc: E. LeBoss
W. Thomas
J. Campbell
D. Schumann

Air Observations, Inc.

September 13, 1990

Mr. C.H. Fancy, P.E.
State Of Florida
Dept. Of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: CSX Transportation
Permit No. A029-152666

Dear Mr. Fancy,

As the authorized consultant representing the above, we hereby request that permission be granted to amend the current operating permit.

We received your letter of August 27, 1990 stating that a new air construction permit will be required. We now respectfully request that you review the following and enclosed information and inform us if that decision can be revised to allow the changes to be made as an amendment.

In 1988 a Midwest International Model No. MH72-4200 choke feeder was placed in operation to control vessel loading particulate emissions. The unit is permitted under the above mentioned permit. This permit was issued as a modification to permit No. A029-62812 and allowed the facility to replace tarpaulins on the ship hold during loading operations with the choke feeder system.

The original intent was to use the choke feeder as the sole pollution control device for this operation. However, it became apparent during start-up testing that the unit was not able to operate in a manner that would result in compliance with environmental standards. Therefore, the displaced air flow from the loading operation was, again, vented through existing Baghouse No. 7. This baghouse had previously been in use to filter displaced air from the holds while they were covered by tarpaulins as well to provide a pick-up point at the belt 9 to 10 transfer point.

At this time, CSX Transportation, Inc. proposes to upgrade the vessel loading particulate emission control capability by replacing the existing choke feeder device with a DCL manufactured device that has been designed and patented by Occidental Petroleum. This design is now in use at Occidental's vessel loading facility in Jacksonville.

ENVIRONMENTAL CONSULTING AND ENGINEERING

P. O. BOX 11204 • TAMPA, FLORIDA 33680 • (813) 654-6800
333 FALKENBURG ROAD • SUITE A-115 • TAMPA, FLORIDA 33619 • FAX: (813) 653-4421

Air Observations, Inc.
333 FALKENBURG RD.
SUITE A-115
TAMPA, FL 33619

TAMPA, FL 336
PM
14 SEP
1990

Mr. C.H. Fancy, P.E.
State Of Florida
Dept. Of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

The currently permitted vessel loading rate of 3,000 tons per hour will remain the same. The proposed system will continue to be vented through baghouse No. 7 which will also continue to control the belt 9 to 10 transfer point.

The proposed changes in the vessel loading system are as follows:

- the graduated metal telescoping loading chute will be replaced with Rhino-Hyde urethane cones that will allow increased retractability and longer life span.

- the gear box that controls retraction of the loading chute will be moved from its current location at the top of the chute to a location approximately in the middle of the boom to increase accessibility for maintenance.

- the loading spout will be replaced with a new design that will eliminate the existing moveable, computer controlled loading gates with a dead fall box which will incorporate a double layer skirt. This loading spout will be designed and manufactured to be interchangeable with the existing Midwest International Model No. MH72-4200 choke feeder. In the event that the new system does not meet compliance standards, the Midwest choke feeder will be repaired and re-installed. In addition, the capability to interchange the two spouts will allow the facility to have a back-up device for use at all times.

- a new exterior shroud will be installed.

CSX Transportation, Inc. is proposing this equipment upgrade due to the fact that the current system has never operated in a satisfactory manner. It has caused ongoing maintenance problems and required excessive man-hours to keep it in compliance with regulatory standards. In addition, the system has exhibited unexpected wear causing excessive maintenance and repair costs.

Enclosed please find manufacturer's specifications for the proposed system and a sketch showing the proposed changes. CSX Transportation would like to schedule the new installation to commence in November, 1990

I trust this submission is sufficient. If you have questions or need further data, please contact me. Thank you for your prompt attention to this matter.

Sincerely,

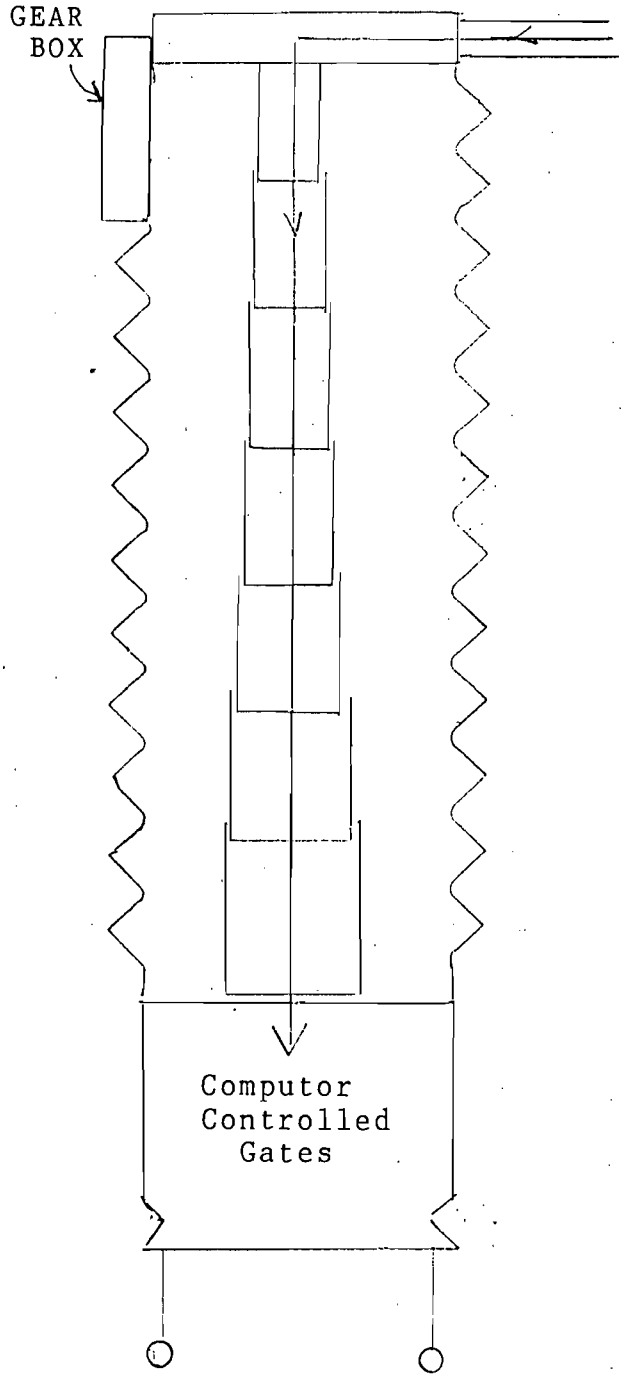
E.J. LeBoss

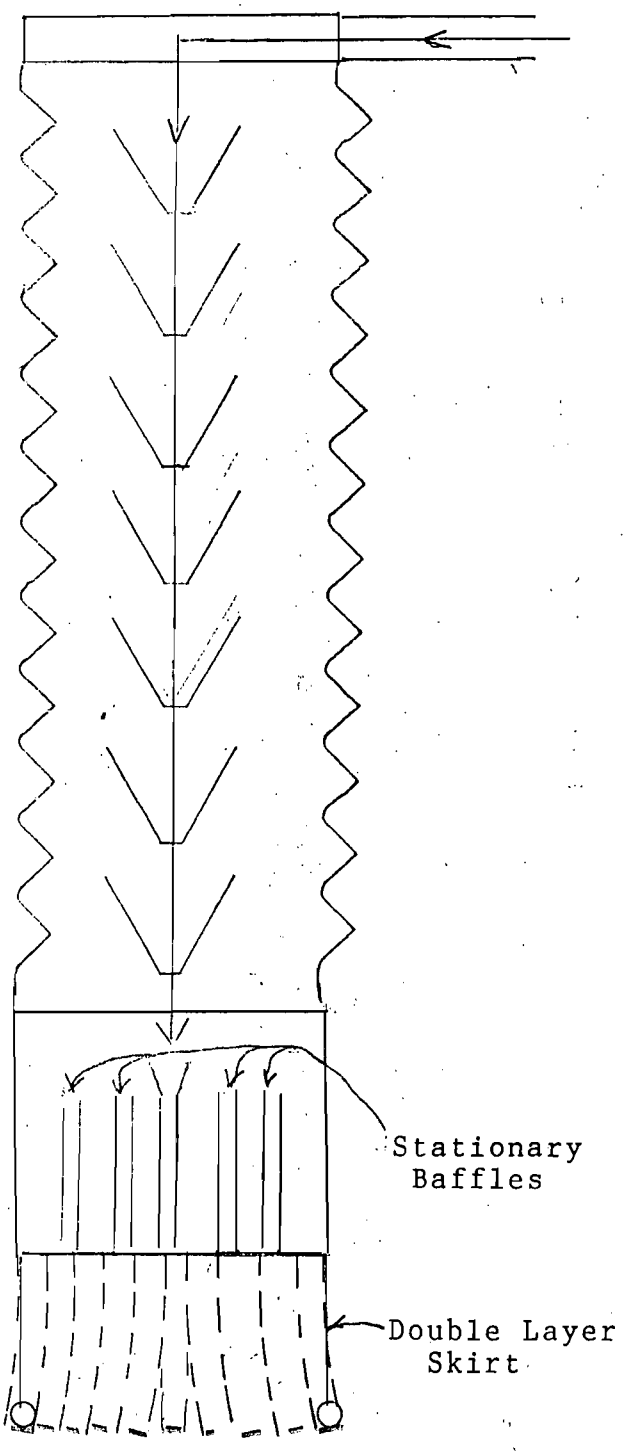
Copies to: Mr. Harry Kerns, P.E./DER, Southwest District
Mr. Jerry Campbell, P.E./ EPCHC
Mr. Dick Schumann/CSX Transportation

M. Harley

CSX TRANSPORTATION

EXISTING SYSTEM	PROPOSED SYSTEM





Dust Control and Loading Systems

August 11, 1989

F.C.: CSX (TAMPA)

Mr. Richard A. Schuman
500 Water St.
Jacksonville, Fl 32232-5052

DCL Proposal
No. 890803RM

Dear Mr. Schumann,

Enclosed please find our equipment proposal and specifications in response to your request for quotation for a replacement ship loading spout to handle 3000 TPH of phosphate products.

The equipment quoted is generally the same in design as provided to Occidental. In order to provide for best possible price and delivery, we have not included our normal spout winch package.

As you know, the dead fall box which we are quoting was designed by Occidental and is patented under no. 4727913. We have been advised that DCL will be allowed to build the box. Occidental at this time has not determined if there should be a charge to use the design. The fee if any will be passed along to CSX when determined by Occi.

The equipment quoted is generally as described on the enclosed sales drawing

Please feel free to call this office direct if you should have any questions or further requirements regarding this proposal.

Very truly yours,

Enc. SKETCH, 8.11.89
Dwg ov ec

Reinhard Matye
DCL INC.

P.O. Box 125, Charlevoix, Michigan 49720
Telephone No. (616) 547-5600
Fax No. (616) 547-5832

SPECIFICATIONS
DCL TELESCOPIC SPOUT MODEL OV66-60RD

NET WEIGHT	5000 LB
RETRACTED HEIGHT	9 FT. Spout/ 6 FT D.Box / 5 FT Skirt
TRAVEL	60 Ft
PRODUCT INLET	30 In. Dia. Tapered to 26 In. Constructed of 1/4 220 BHN AR Steel and Provided With Twelve (12) 7/8 In. Dia. Mounting Holes on a 33 In. Dia. B.C.
DUST OUTLET	9 In. X 28 In. Flanged Connection for 8000 CFM Minimum Air Withdrawal
UPPER HOUSING	Constructed of Mild Steel With Integral Support Channels
SPOUT CONSTRUCTION	9/16 In Thick Rhino-Hyde Urethane Cones, 44 X 28 X 48 High Provided With 3 In. High Steel Collars and Linked together By (3) 3/8 Dia. Aircraft Cable Harnesses to provide a 41 In. Pitch Dimension.
DISCHARGE	Special Design Dead Fall Box Constructed Of 1/4 220 BHN AR Steel With 3/16 Mild Steel Shell 6 FT. Tall. 1/4 In. X 12 In. Wide Double Layer 5 Ft. Long Skirt Provided to Maintain Contact With Product Pile
DRIVE SYSTEM (30 HP, 104,000 In. Lb 24 RPM, Two Cable Hoist By Customer)	Spout Supplied With (6) Ball Bearing Type Cable Sheaves To Accept Customers 1/2 Dia Wire Rope. Sheave Arrangement on Spout Provides a Four Part Hoist System For a Lifting Speed Of 25 FPM. Wire Rope Reeving System To Hoist By Customer

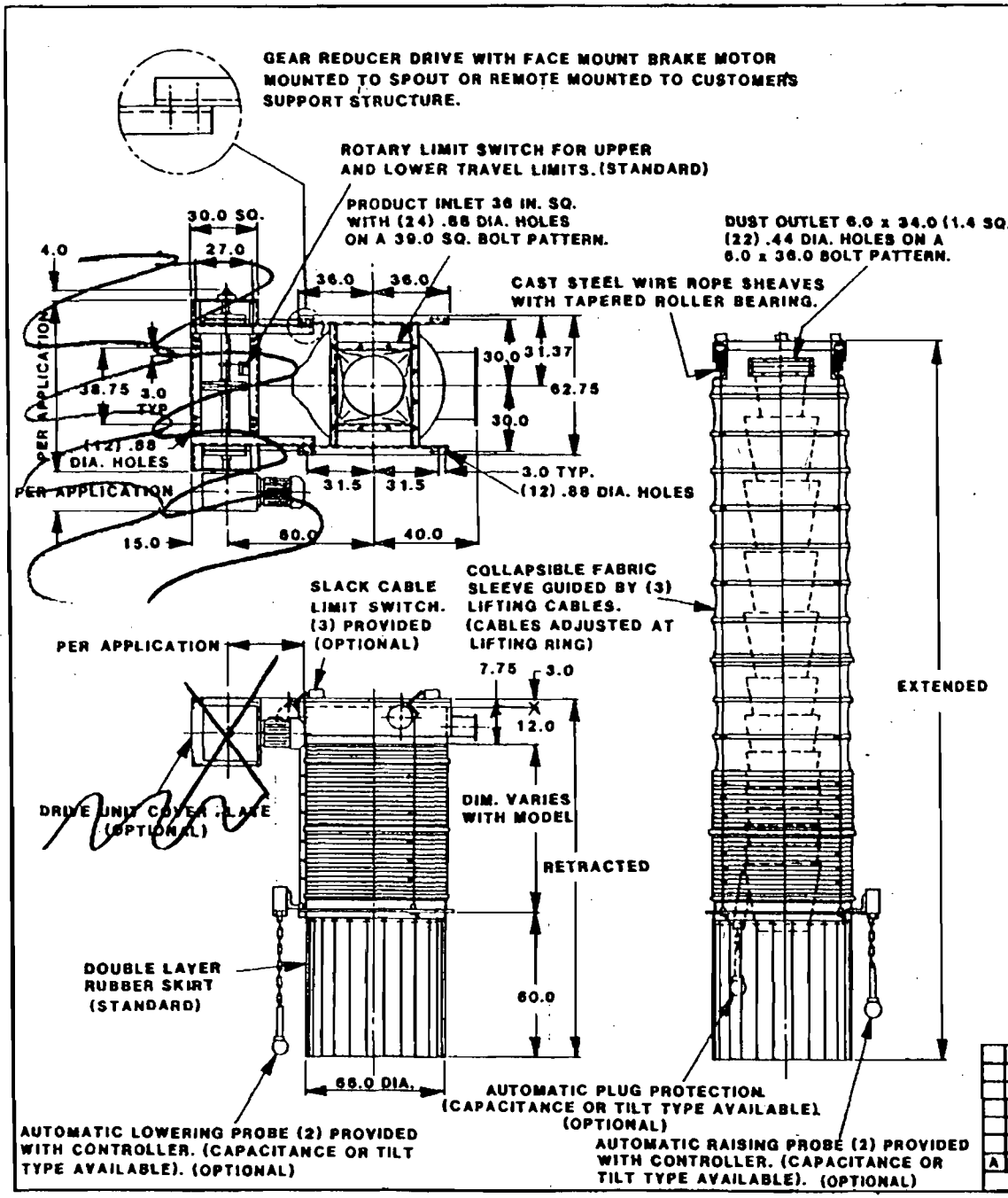
OPTIONAL EQUIPMENT

DRIVE CONTROLS	**TRAVEL LIMITS** One (1) NEMA 4 Rotary Limit Switch With Two (2) S.P.D.T. Switches for Full Upper and Lower Travel Limits **SLACK CABLE** Three (2) NEMA 4 S.P.D.T. Slack Cable Limit Switch Packages, One (1) at Each Hoist Cable to Stop Spout Drive Should Spout Rest on Product Pile or Cable Failure Occur **OVERTENSION** Three (2) NEMA 4 S.P.D.T. "Dillon" Strain Switches, One (1) Provided at Each Hoist Cable Termination to Stop Drive in Event of Overloaded Condition
AUTOMATIC SENSING PROBE	**AUTO - RAISING** (2) Tilt Switch Probes With Controller To Monitor Product and Maintain Spout Distance to Pile

---

FINISH	All Fabricated Components Power Tool Cleaned With One Coat Of Self Priming Urethane/Enamel

FOR REF ONLY.



MODEL	TRAVEL	RETR.	EXTD.	NET WT. URA.	NET WT. STL.	DRIVE HP. URA.	DRIVE HP. STL.
66-10	10'-0"	9'-9"	19'-9"	3515	3783	5	5
66-15	15'-0"	10'-0"	25'-0"	3724	4080	5	5
66-20	20'-0"	10-6"	30'-6"	4085	5290	5	7.5
66-25	25'-0"	10'-9"	35'-9"	4913	5610	7.5	7.5
66-30	30'-0"	11'-3"	41'-3"	5236	6319	7.5	7.5
66-35	35'-0"	11'-7"	46'-7"	5461	6657	7.5	7.5
66-40	40'-0"	12'-3"	52'-3"	5945	7836	7.5	10
66-45	45'-0"	12'-11"	57'-11"	6254	8172	7.5	10
66-50	50'-0"	13'-7"	63'-7"	6906	8510	10	10
66-55	55'-0"	14'-4"	69'-4"	7248	9652	10	15
66-60	60'-0"	15'-0"	75'-0"	7438	9957	10	15
66-65	65'-0"	15'-8"	80'-8"	7782	10527	10	15
66-70	70'-0"	16'-3"	86'-3"	8698	11086	15	15
66-75	75'-0"	17'-1"	92'-1"	8934	12187	15	15
66-80	80'-0"	17'-9"	97'-9"	9231	12701	15	15

LOADING CAPACITY- 1800 CFM

AVERAGE AIR WITHDRAWAL- 5000 CFM

LIFTING SPEED- 6 FPM MIN. TO 36 FPM MAX.

GENERAL NOTES

ALL INDUSTRIAL VOLTAGES AVAILABLE FOR ELECTRICAL COMPONENTS.

PRE-WIRING OF ELECTRICAL COMPONENTS TO PAN MOUNTED JUNCTION BOX OPTIONAL.

ELECTRICAL ENCLOSURES NEMA 4 STANDARD. NEMA 4X,7 AND 9 OPTIONAL.

COLLAPSIBLE FABRIC SLEEVE IS 32 OZ. URETHANE COATED VINYL NYLON WITH HEAVY EXTRUDED ALUMINUM SUPPORT CHANNELS.

METAL SURFACES ARE ETCHED, PRIMED AND FINISHED WITH INDUSTRIAL ENAMEL.

LOADING CAPACITY LISTED IS APPROXIMATE AND BASED ON FREE FLOWING PRODUCTS. CONSULT DCL FOR ACTUAL REQUIREMENTS.

AIR WITHDRAWAL REQUIREMENTS ARE APPROXIMATE. CONSULT DCL FOR FINAL RECOMMENDATIONS.

SPECIFICATIONS AND/OR DIMENSIONAL DATA SUBJECT TO CHANGE. CONSULT DCL FOR CERTIFIED DRAWINGS.

CONE CONSTRUCTION NOTES: CONTAINED FLOW DESIGN STANDARD WITH 7/16" RHINO HYDE® URETHANE CONES. A.R. STEEL AND 304 OR 316 STAINLESS STEEL OPTIONAL. OTHER MATERIALS AVAILABLE TO SUIT APPLICATION.

		DETAIL	QUAN.	DESCRIPTION	MATERIAL	WEIGHT
A	10/1/88					
REVISIONS						

DCL — SPECIALISTS IN ADVANCED DESIGN LOADING SYSTEMS — CHARLEVOIX, MICHIGAN — P.O. BOX 128

TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONAL — DECIMAL — ANGULAR

DRAWN BY TKK | SCALE NONE | CHECKED BY TRC | DATE 4/2/88

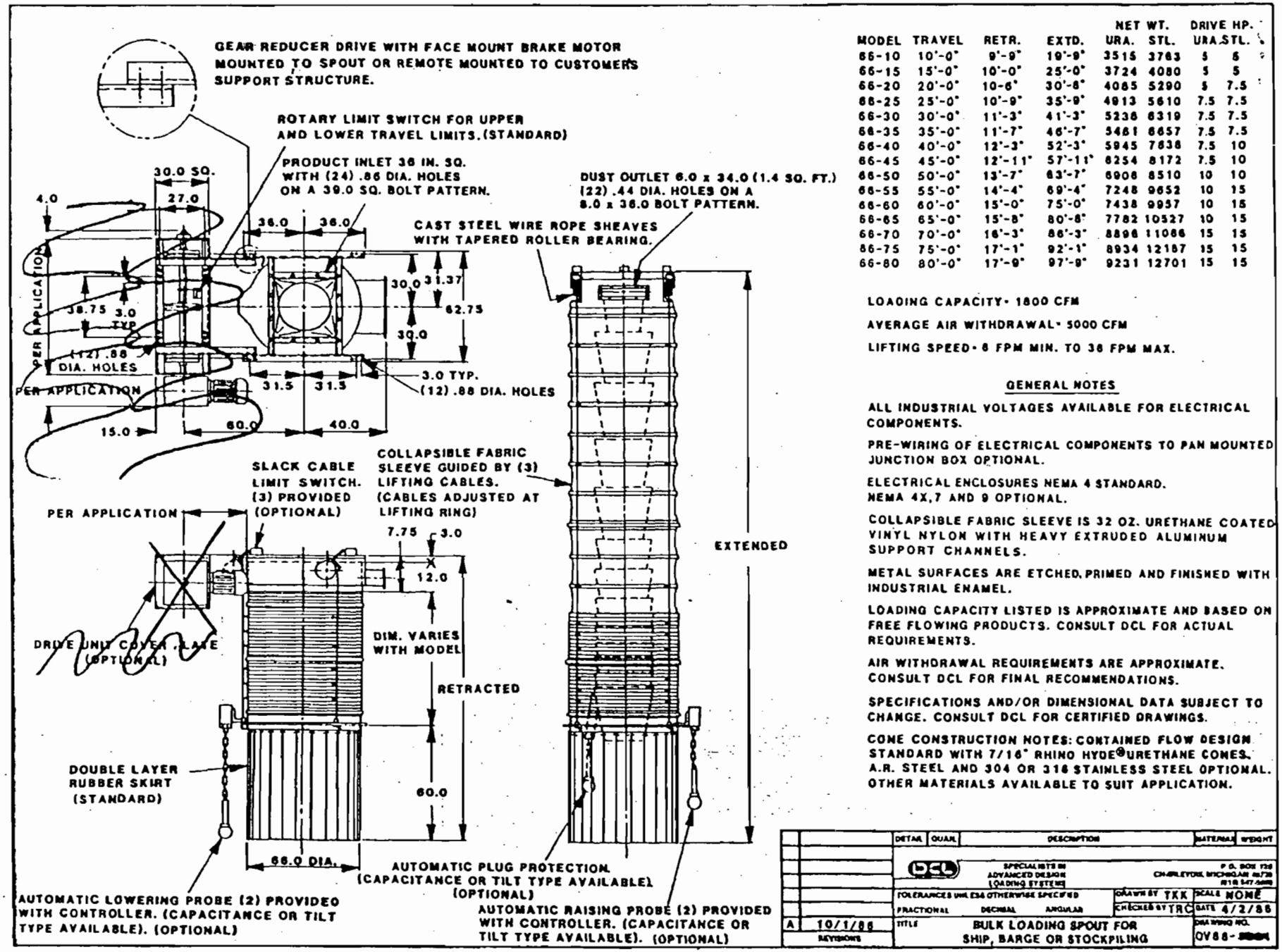
TITLE: BULK LOADING SPOUT FOR SHIP, BARGE OR STOCKPILING

DRAWING NO. OV86-[illegible]

FOR REF. ONLY.

P.6

APR 25 '90 09:29



MODEL	TRAVEL	RETR.	EXTD.	NET WT. URA.	NET WT. STL.	DRIVE HP. URA.	DRIVE HP. STL.
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66-25	25'-0"	10'-9"	35'-9"	4913	5610	7.5	7.5
66-30	30'-0"	11'-3"	41'-3"	5236	6319	7.5	7.5
66-35	35'-0"	11'-7"	46'-7"	5481	6657	7.5	7.5
66-40	40'-0"	12'-3"	52'-3"	5945	7638	7.5	10
66-45	45'-0"	12'-11"	57'-11"	6254	8172	7.5	10
66-50	50'-0"	13'-7"	63'-7"	6908	8510	10	10
66-55	55'-0"	14'-4"	69'-4"	7248	9652	10	15
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66-70	70'-0"	16'-3"	86'-3"	8898	11066	15	15
66-75	75'-0"	17'-1"	92'-1"	8934	12187	15	15
66-80	80'-0"	17'-9"	97'-9"	9231	12701	15	15

LOADING CAPACITY- 1800 CFM

AVERAGE AIR WITHDRAWAL- 5000 CFM

LIFTING SPEED- 8 FPM MIN. TO 38 FPM MAX.

GENERAL NOTES

ALL INDUSTRIAL VOLTAGES AVAILABLE FOR ELECTRICAL COMPONENTS.

PRE-WIRING OF ELECTRICAL COMPONENTS TO PAN MOUNTED JUNCTION BOX OPTIONAL.

ELECTRICAL ENCLOSURES NEMA 4 STANDARD. NEMA 4X,7 AND 9 OPTIONAL.

COLLAPSIBLE FABRIC SLEEVE IS 32 OZ. URETHANE COATED VINYL NYLON WITH HEAVY EXTRUDED ALUMINUM SUPPORT CHANNELS.

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SPECIFICATIONS AND/OR DIMENSIONAL DATA SUBJECT TO CHANGE. CONSULT DCL FOR CERTIFIED DRAWINGS.

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	DETAIL	QUAN.	DESCRIPTION	MATERIAL	WEIGHT

DCL — SPECIALISTS IN ADVANCED DESIGN LOADING SYSTEMS — P.O. BOX 726 CHARLEVOIX, MICHIGAN 49720 (616) 547-6600

TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONAL — DECIMAL — ANGULAR

DRAWN BY TKK | CHECKED BY TRC | SCALE NONE | DATE 4/2/88

A 10/1/88 REVISIONS

TITLE: BULK LOADING SPOUT FOR SHIP, BARGE OR STOCKPILING

DWG NO. OV88-[illegible]

P 256 396 188

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. W. T. Whale Terminal Mgr.-Rockport	
Street and No. CSX Transportation 3701 Causeway Blvd.	
P.O. State and ZIP Code Tampa, FL 33619	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date mailed: 9/6/90 AC 29-129122	

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

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☒ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: Mr. W. T. Whale Terminal Manager-Rockport CSX Transportation 3701 Causeway Boulevard Tampa, Florida 33619	4. Article Number P 256 396 188 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X Joe Crescione	
7. Date of Delivery 9-11	

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

File Copy

Florida Department of Environmental Regulation

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

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

August 27, 1990

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

RE: Amendment of Modular Vessel Loader Air Construction Permit No. AC 29-129122

Dear Mr. Whale:

Ms. E. J. LeBoss of Air Observations, Inc. contacted us about the above referenced source during the week of August 16. Ms. LeBoss explained that there were problems with the vessel loader and that it needed to be replaced. She asked if this could be accomplished through an amendment to construction permit AC 29-129122.

The replacement of the modular vessel loader will require the submission of an application for a new air construction permit and the processing fee required by Chapter 17-4, F.A.C.

Please call Barry Andrews at (904) 488-1344 or write to me at the above address, if you have any questions.

Sincerely,

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

cc: E. LeBoss
W. Thomas
J. Campbell
Reading File
Mike Harley } 9-6-90 RRM

P 794 947 070

RECEIPT FOR CERTIFIED MAIL

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

Sent to W.T. Whale, Term. Mgr. CSX Transportation	
Street and No. 3701 Causeway Boulevard	
P.O., State and ZIP Code Tampa, FL 33619	
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: 04/29/88 Permit: AC 29-129122	

PS Form 3800, June 1985

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:	4. Article Number
Mr. W.T. Whale Terminal Manager - Rockport CSX Transportation 3701 Causeway Boulevard Tampa, FL 33619	P 794 947 070 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature – Addressee X	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature – Agent X Joe Crescenzo	
7. Date of Delivery 5-2-88	

PS Form **3811**, Mar. 1987 ★ U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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

April 28, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

Dear Mr. Whale:

RE: Amendment of Permit No. AC 29-129122

The Department is in receipt of Mr. E. J. LeBoss's February 16, 1988, letter requesting the permit to construct the modular vessel loader installation at the Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, Hillsborough County, Florida be extended to allow time to complete the installation, conduct the compliance tests, and submit an application for permit to operate. This request is acceptable and the expiration date of permit No. AC 29-129122 is changed from April 30, 1988 to October 31, 1988.

A copy of this letter must be attached to the referenced construction permit and shall become a part of that permit.

Sincerely,

Dale Twachtmann

Dale Twachtmann
Secretary

DT/ks

attachment

cc: B. Thomas, SW District
V. San Agustin, HCEPC
E. J. LeBoss, Air Observations

ATTACHMENTS

Best Available Copy

B[illegible] Mgs
Tampa, FL

COMMISSION
RODNEY COLSON
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
HAVEN POE
JAMES D. SELVEY
PICKENS C. TALLEY II

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

RECEIVED

APR 15 1988

DER - BAQM

MEMORANDUM

Date 04/13/88

To Bill Thomas

From Victor San Agustin VSA

Subject: Permit Extension for CSX Transportation

As per our discussion, enclosed is a copy of a letter of request from the permittee's consultant requesting an extension of permit AC29-129122. This permit was issued by BAQM and you informed me BAQM should extend the permit. Our Agency has no objections to the request.

Thank you for your assistance in this matter. If I can be of assistance, please call me.

pjb

Copied: Willard Hanks
BT/CHF

Air Observations

February 16, 1988

Mr. Victor SanAgustin
Hillsborough County
Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

RE: CSX Transportation, Inc.
Permit No. AC29-129122

Dear Victor,

As the authorized consultant representing the above facility, we hereby request a six (6) month extension of the expiration date for the above mentioned permit, as per our telephone conversation, to October 31, 1988.

This extension is necessary in order to allow CSX Transportation enough time to complete installation of the choke feeder and still meet the Permit requirement to submit a Certificate Of Completion Of Construction 90 days prior to the expiration date of the above mentioned Permit.

The Certificate Of Completion will be submitted in as timely a manner as possible.

Please provide Air Observations with a copy of your response. Thank you for your consideration.

Sincerely,

Ellie LeBoss

E.J. LeBoss

Copies To: Mr. W.T. Whale
Mr. W.M. Cummings

This letter must be attached to your permit and becomes a part of that permit. If you have any questions, please call Mr. Jim McDonald of my staff at (813) 623-5561.

Sincerely,

Richard D. Garrity, Ph.D.
District Manager
Southwest District

RDG/AJW/pjb

cc: EPCHC
Richard Donolan, Esq.

CSX.DOC

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT AMENDMENT and all copies were mailed before the close of business on FEB 10 1988 to the listed persons.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to Section 120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Marilyn Quispe
Clerk

FEB 10 1988
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
4520 OAK FAIR BLVD.
TAMPA, FLORIDA 33610-7347
813-623-5561
Suncom—552-7612

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
DR. RICHARD D. GARRITY
DISTRICT MANAGER

February 10, 1988

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

Dear Mr. Whale:

The Department is in receipt of your request dated January 12, 1988 to amend DER Permit No. AC29-129122. The following changes are hereby made in the permit:

EXPIRATION DATE

Change from: 12-31-87

Change to: 04-30-88

Persons whose substantial interests are affected by this permit amendment have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, F.A.C., and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time, this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order 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; 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 with the Clerk of the Department.

Air Observations

January 12, 1988

Mr. Victor SanAgustin
Hillsborough County
Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

RE: CSX Transportation, Inc.
Permit No. AC29-129122

Dear Victor,

As the authorized consultant representing the above facility, we hereby request a one hundred twenty (120) day extension of the expiration date for the above mentioned permit, as per our telephone conversation this date, to April 30, 1988.

Please refer to Midwest International's letter of November 16, 1987 regarding an accident during installation of the new system that caused extensive damage to the equipment and, therefore, delays in the installation schedule.

The Certificate Of Completion will be submitted in as timely a manner as possible.

Please provide Air Observations with a copy of your response. Thank you for your consideration.

Sincerely,

Ellie LeBoss

E.J. LeBoss

Copies To: Mr. W.T. Whale
Mr. F.C. Edmonds

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Dale Twachtmann

FROM: Howard L. Rhodes

SUBJ: Approval of a Construction Permit Extension for CSX Transportation
State Construction Permit Number: AC 29-129122

DATE: April 28, 1988

Attached for your approval and signature is a letter prepared by Central Air Permitting to extend the expiration date of a construction permit issued to the above mentioned company for a modular vessel loader installation. The extension will allow additional time for the permittee to complete the installation and submit an application for permit to operate.

The facility is located in Tampa, Hillsborough, County, Florida. This extension is not controversial.

I recommend your approval and signature.

HLR/aqm/wh

attachments

RECEIVED
APR 28 1988
Office of the Secretary

PM
BApril 1988
Tampa, FL

File Copy

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

Date 04/13/88

To Bill Thomas

From Victor San Agustin VSA

Subject: Permit Extension for CSX Transportation

As per our discussion, enclosed is a copy of a letter of request from the permittee's consultant requesting an extension of permit AC29-129122. This permit was issued by BAQM and you informed me BAQM should extend the permit. Our Agency has no objections to the request.

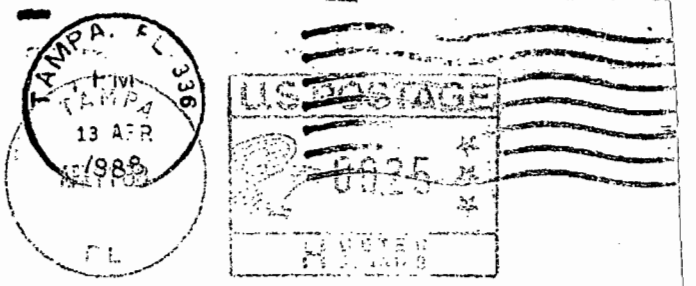
Thank you for your assistance in this matter. If I can be of assistance, please call me.

pjb

Copied: Willard Hanks
BT/CHF

Hillsborough County Environmental Protection Commission

1900 9th Avenue
Tampa, Florida 33605



Mr. Bill Thomas, P.E.
Bureau of Air Quality Management
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Air Observations

February 16, 1988

Mr. Victor SanAgustin
Hillsborough County
Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

RE: CSX Transportation, Inc.
Permit No. AC29-129122

Dear Victor,

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The Certificate Of Completion will be submitted in as timely a manner as possible.

Please provide Air Observations with a copy of your response. Thank you for your consideration.

Sincerely,

Ellie LeBoss

E.J. LeBoss

Copies To: Mr. W.T. Whale
Mr. W.M. Cummings

RECEIVED
FEB 18 1988
E.P.C. OF H.C.
AIR PROGRAM

ENVIRONMENTAL CONSULTING AND ENGINEERING

P. O. BOX 11204 TAMPA, FLA. 33680 (813) 985-3285

This letter must be attached to your permit and becomes a part of that permit. If you have any questions, please call Mr. Jim McDonald of my staff at (813) 623-5561.

Sincerely,

Richard D. Garrity, Ph.D.
District Manager
Southwest District

RDG/AJW/pjb

cc: EPCHC
Richard Donolan, Esq.

CSX.DOC

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT AMENDMENT and all copies were mailed before the close of business on FEB 10 1988 to the listed persons.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to Section 120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Marilyn Quispe
Clerk

FEB 10 1988
Date

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
4520 OAK FAIR BLVD.
TAMPA, FLORIDA 33610-7347
813-623-5561
Suncom—552-7612

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
DR. RICHARD D. GARRITY
DISTRICT MANAGER

February 10, 1988

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

Dear Mr. Whale:

The Department is in receipt of your request dated January 12, 1988 to amend DER Permit No. AC29-129122. The following changes are hereby made in the permit:

EXPIRATION DATE

Change from: 12-31-87

Change to: 04-30-88

Persons whose substantial interests are affected by this permit amendment have a right, pursuant to Section 120.57, Florida Statutes, to petition for an administrative determination (hearing) on it. The petition must conform to the requirements of Chapters 17-103 and 28-5.201, F.A.C., and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399, within fourteen (14) days of receipt of this notice. Failure to file a petition within the fourteen (14) days constitutes a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes. This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with this paragraph or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time, this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order 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; 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 with the Clerk of the Department.

Jc

Air Observations

RECEIVED
JAN 12 1988
E.P.C. OF H.C.
AIR PROGRAM

January 12, 1988

Mr. Victor SanAgustin
Hillsborough County
Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

RE: CSX Transportation, Inc.
Permit No. AC29-129122

Dear Victor,

As the authorized consultant representing the above facility, we hereby request a one hundred twenty (120) day extension of the expiration date for the above mentioned permit, as per our telephone conversation this date, to April 30, 1988.

Please refer to Midwest International's letter of November 16, 1987 regarding an accident during installation of the new system that caused extensive damage to the equipment and, therefore, delays in the installation schedule.

The Certificate Of Completion will be submitted in as timely a manner as possible.

Please provide Air Observations with a copy of your response. Thank you for your consideration.

Sincerely,

Ellie LeBoss

E.J. LeBoss

Copies To: Mr. W.T. Whale
Mr. F.C. Edmonds

THE TAMPA TRIBUNE

Published Daily
Tampa, Hillsborough County, Florida

DER

SEP 24 1987

BAQM

State of Florida
County of Hillsborough } ss.

Before the undersigned authority personally appeared G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a .....

LEGAL NOTICE

.....

.....

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

in the matter of .....

NOTICE OF INTENT

.....

.....

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

----------SEPTEMBER 23, 1987----------

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

G. T. Gleason

Sworn to and subscribed before me, this 23rd *day of* SEPTEMBER *A.D. 19* 87

Leslie A. Peralta

(SEAL)

LESLIE A. PERALTA NOTARY PUBLIC STATE OF FLORIDA

Notary Public, State of Florida
My Commission Expires Nov. 23, 1990
Bonded Thru Troy Fain - Insurance Inc.

State of Florida
Department of
Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to CSX Transportation, to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, in Hillsborough County, Florida. The universal transverse mercator (UTM) coordinates are Zone 17, 360.1 km East, and 3088.1 km North. The Standard Industrial Classification (SIC) Code for this facility is 4463.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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 proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Dept. of
Environmental Regulation
Bureau of Air
Quality Management
2600 Blair Stone Road
Tallahassee, Florida
32399-2400
Dept. of
Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

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

4135 9/23/87

PM
Express Mail
B 32198555
9/23/87

File Copy

Air Observations

DER
SEP 24 1987
BAQM

September 23, 1987

C.H. Fancy, P.E.
Deputy Chief
Bureau Of Air Quality Management
State Of Florida
Dept. Of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: CSX Transportation
Permit No. AC29-129122

Dear Mr. Fancy,

Enclosed please find the Publisher's Affidavit for publication of Notice Of Intent for the above Permit, as re-published this date in the Tampa Tribune. I have also provided Jim McDonald of the Tampa District office with a copy of this Affidavit.

If there is anything further needed, please contact us. According to Mike Harley, it will be possible to call Mr. Whale at CSX as soon as this Permit is signed so that they may begin construction. We appreciate your attention to this matter.

Thank you for your consideration.

Sincerely,

E.J. LeBoss

E.J. LeBoss

Copies To: Mr. W.T. Whale
Mr. F.C. Edmunds

Copied: Bill Thomas - SW Dist. } 9/25/87
Mike Harley

ENVIRONMENTAL CONSULTING AND ENGINEERING

P. O. BOX 11204 TAMPA, FLA. 33680 (813) 985-3285

Air Observations
P.O. Box 11204
Tampa, Florida 33680

C.H. Fancy, P.E.
Deputy Chief
Bureau Of Air Quality Management
State Of Florida
Dept. Of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

POST OFFICE TO ADDRESSEE

EXPRESS MAIL
NEXT DAY SERVICE

B 32198555

ORIGIN

Post Office ZIP Code: 33610
Date: 9/23
Time: 11 AM
Postage: 10.75
Initials of Receiving Clerk: FL

ACCEPTANCE

X

DESTINATION

Date In: 9/24
Time: 13:00

X (signature)

DELIVERY WAS ATTEMPTED

1. Consult your Next Day Service Directory for destination and rate information.
2. Prepare the customer portion of the Next Day Service mailing label (Post Office to Post Office or Post Office to Addressee).
3. Affix postage meter strip or adhesive stamps, or flat rate stamp. Or use your Express Mail Corporate Account number.
4. Mail at an Express Mail post office, Express Mail collection box, or contact your local post office for information on scheduled pick-up service.

DER
SEP 24 1987
BAQM

Account Number [redacted]
(Using an authorized number indicates postage and fees paid)
Express Mail Corporate Account No. [redacted]
Federal Agency Control No. [redacted]

WAIVER OF SIGNATURE AND INDEMNITY
SIGNED:

ADDRESSEE'S COPY

FROM:
AIR OBSERVATIONS
P.O. BOX 11204
TAMPA, FL. 33680

TO:
Telephone Number:
C.H. FANCY
DEPT. OF ENVIRONMENTAL REGULATION
2600 BLAIR STONE RD.
TALLAHASSEE, FL
32399-2400

PLACE MAILING LABEL HERE

Label 11-B (Jan. 1987) ★ U.S.G.P.O.-1987-158-386; 164-824; 164-825

SEP 23 87
FLA
5.00

USPO
SEP 23 1987

P 274 007 689

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to W.T. Whale CSX Transportation	
Street and No. 3701 Causeway Boulevard	
P.O., State and ZIP Code Tampa, FL 33619	
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: 09/21/87 Permit: AC 29-129122	

PS Form 3800, June 1985 ☆ U.S.G.P.O. 1985-480-794

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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

3. Article Addressed to: Mr. W.T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

4. Type of Service:	Article Number
☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	P 274 007 689

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

5. Signature – Addressee
X

6. Signature – Agent
X Joe Pearson

7. Date of Delivery
9 25 87

8. Addressee's Address *(ONLY if requested and fee paid)*
3701 Causeway Blvd
Tampa, FL 33619

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

September 21, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager-Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

Dear Mr. Whale:

RE: Application for a Modular Vessel Loader AC29-129122

We received your affadavit of publication for the above referenced project on September 2, 1987. On September 16, 1987, it was brought to our attention that the Lutz Party Line does not meet all of the criteria for a newspaper of general circulation in the county. Specifically, the company has three publications all of which are not sold. It cannot be determined if the notice appeared in the publication offered for sale. The paper does not appear to have general circulation in the county--particularly the port area where the project is to be located. Our attorney advises us that this can be interpreted as an inadequate public notice. As a result, the U.S. Environmental Protection Agency or any third party could challenge the issuance of the permit at any time.

Please republish the notice of intent in a major newspaper of general circulation in Hillsborough County. It has also been brought to our attention that there is an error in the street address for our Southwest District Office in Tampa. please correct the street address in the notice to read "4520 Oak Fair Boulevard".

Presently, the permitting clock remains stopped as of August 12, 1987 (day 62). We understand that you are anxious to receive the permit. Processing of your application will resume within 14 days after receipt of an affadavit of publication of proper notice in a major newspaper of general circulation in Hillsborough County.

If you have any questions or wish to meet with us, please call Mike Harley at (904) 488-1344 or Betsy Pittman, our air attorney, at (904) 488-9730 or write to me at the above address.

Sincerely,

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

CF/MH/ss

cc: Bill Thomas, SW District
Jerry Campbell, HCEPC
Frank C. Edmonds, P.E.
Ellie La Boss, Air Observations
Betsy Pittman, FDER

BEST AVAILABLE COPY

PM
31 Aug. 87
Tampa, Fl

9/2
Calculate dts.
Make like a copy
9 green sheet.

DER
SEP 2 1987
BAQM

PUBLISHER'S AFFIDAVIT
LUTZ PARTY LINE

P.O. Box 307 **Phones: 949-1501**
Lutz, Florida 33549 **Hillsborough County, Florida**

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH:

Before the undersigned authority appeared Grace Patterson who on oath says that he is the editor of the PARTY LINE, a weekly newspaper published in Hillsborough County, Florida; that the attached copy of advertisement being a

Notice of Intent

in the matter of Air Observations

P.O. Box 11204, Tampa, Florida 33680

in the circuit Court was published in said newspaper in the issues of August 27, 1987

Affiant further says that the said PARTY LINE is a newspaper published in Lutz, in said Hillsborough County, Florida and that said newspaper has been heretofore continuously published in said Hillsborough County, Florida, once a week and has been entered as second class mail matter at the Post Office in Lutz in said County, Florida for one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Sworn to and subscribe before me

this 27th day of August Grace Patterson
Editor

A.D. 19 87

Patricia S. Lanier
(SEAL) Notary Public

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. APR. 5,1991
BONDED THRU GENERAL INS. UND.

Copied like Harley - 9/2/87 mm

State of Florida
Department of
Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to CSX Transportation, to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, in Hillsborough County, Florida. The universal transverse mercator (UTM) coordinates are Zone 17, 360.1 km East, and 3088.1 km North. The Standard Industrial Classification (SIC) Code for this facility is 4463. Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes. 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 proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida, 32301. If no hearing officer has been assigned, the petition is to be filed with the Departments's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right to such persons has to request a hearing under Section 120.57, Florida Statutes. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Dept. of Environmental Regulation, Bureau of Air Quality Management, 2600 Blair Stone Road, Tallahassee, Florida, 32399-2400; and Dept. of Environmental Regulation, Southwest District 4520 Live Oak Fair Boulevard, Tampa, Florida, 33610-7347. Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.
August 27, 1987

Air Observations
P.O. Box 11204
Tampa, Florida 33680

TAMPA, FL 336
PM
31 AUG
1987

STAMP COLLECTING
IS A HOBBY
FOR A LIFETIME

C.H. Fancy, P.E.
Deputy Chief
Bureau Of Air Quality Management
State Of Florida
Dept. Of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Technical Evaluation
and
Preliminary Determination

CSX Transportation
Hillsborough County

Midwest International MH72-4200TPH
Modular Vessel Loader Installation

Permit Number
AC 29-129122

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

August 11, 1987

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

	Initial	Date
1. TO: (NAME, OFFICE, LOCATION) Mike Harley BAQM - Tallahassee		
2.		
3.		
4.		

DER
AUG 17 1987
BAQM

REMARKS:

Does the first paragraph of 17-2.610 prevent you from applying 17-2.610(3), since the source is subject to 17-2.650(2)(c)11.b. ?

INFORMATION

- [ ] Review & Return
- [ ] Review & File
- [ ] Initial & Forward
- [ ]

DISPOSITION

- [ ] Review & Respond
- [ ] Prepare Response
- [ ] For My Signature
- [ ] For Your Signature
- [ ] Let's Discuss
- [ ] Set Up Meeting
- [ ] Investigate & Report
- [ ] Initial & Forward
- [ ] Distribute
- [ ] Concurrence
- [ ] For Processing
- [ ] Initial & Return

FROM: Jim McDonald

DATE 8-14-87

PHONE 552-7612

occur during loading. Emissions of 10 percent opacity are allowed when the hatch covering and/or conveyor is moved. The applicant has volunteered to comply with a limitation of five percent opacity (no visible emissions) at all times. The rule also requires confinement of the operation and venting of emissions to a control device that limits emissions to 0.03 grain per dry standard cubic foot in the event the visible emission limitation cannot be met. The applicant has committed, in writing, to retain the present control equipment and take whatever steps are necessary to comply with the applicable standards. The Department accepts the emission limitation offered by the applicant as reasonably available control technology. The applicant's commitment is accepted as reasonable assurance that the source will comply with the regulations.

The project is also subject to the emission limiting standards applicable to sources of unconfined emissions. Rule 17-2.610(3), FAC, requires the use of reasonable measures to prevent unconfined emissions of particulate matter. In this case, the company will be required to implement reasonable "house keeping" practices. The reasonable practices shall include but not be limited to clean-up of dust around the traveling shiploader and on the ship deck.

B. Air Quality Analysis

Since the project is exempt from the requirements of Rule 17-2.510, FAC, New Source Review for Nonattainment Areas, an ambient air quality analysis is not required.

IV. Conclusion

The emission limits that will be imposed have been determined to be in compliance with all applicable requirements of Chapter 17-2, FAC. The permitted maximum allowable emission limits should not interfere with the attainment and maintenance of Florida's ambient air quality standards.

The general and specific conditions listed in the proposed construction permit (attached) will ensure compliance with all applicable requirements of Chapter 17-2, FAC.

P 274 007 716

RECEIPT FOR CERTIFIED MAIL

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

Sent to W. T. Whale CSX TRANSPORTATION	
Street and No. 3701 Causeway Boulevard	
P.O., State and ZIP Code Tampa, FL 33619	
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: 08/12/87 Permit: AC 29-129122	

PS Form 3800, June 1985 ☆ U.S.G.P.O. 1985-480-794

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. [X] Show to whom, date and address of delivery.
2. [ ] Restricted Delivery.

3. Article Addressed to: Mr. W.T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

4. Type of Service:	Article Number
[ ] Registered [ ] Insured [X] Certified [ ] COD [ ] Express Mail	P 274 007 716

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X J. Crescenzi

6. Signature – Agent
X

7. Date of Delivery
8-19-87

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

PS Form 3811, July 1983 447-845 DOMESTIC RETURN RECEIPT

Bill

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

August 11, 1987

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager - Rockport
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

Dear Mr. Whale:

Attached is one copy of the Technical Evaluation and Preliminary Determination to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader, in Tampa, Hillsborough County, Florida.

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

Sincerely,

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

CHF/bm

Attachments

cc: Bill Thomas, SW Dist.
Jerry Campbell, HCEPC
Frank C. Edmonds, P.E.

HP FAX (904) 636-9955
INT CHICAGO
312 555-1212
ELEC TEK
708 677-7660

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to CSX Transportation, to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, in Hillsborough County, Florida. The universal transverse mercator (UTM) coordinates are Zone 17, 360.1 km East, and 3088.1 km North. The Standard Industrial Classification (SIC) Code for this facility is 4463.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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 proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

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

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

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

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

CSX Transportaion
3701 Causeway Boulevard
Tampa, Florida 33619

DER File No. AC 29-129122

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, CSX Transportation, applied on January 7, 1987, to the Department of Environmental Regulation for a permit to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, Hillsborough County, Florida. The universal transverse mercator (UTM) coordinates are Zone 17, 360.1 km East, and 3088.1 km North.

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

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit application. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30)

days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of the notice. 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 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. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. 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, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

Bill Thomas, SW Dist.
Frank C. Edmonds, P.E.
Jerry Campbell, HRC

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 August 12, 1987.

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.

Martha Jane Wise 8-12-87
Clerk Date

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

Technical Evaluation
and
Preliminary Determination

CSX Transportation
Hillsborough County

Midwest International MH72-4200TPH
Modular Vessel Loader Installation

Maggie-
Don't forget that
Judy (or Jane in
Judy's absence) needs
to be the clerk.
(5)
Clair

Permit Number
AC 29-129122

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

August 11, 1987

I. Project Description

A. Applicant

CSX Transportation
3701 Causeway Boulevard
Tampa, FL 33619

B. Project and Location

The applicant proposes to replace an existing chute for the loading of phosphate materials into shipholds with a Midwest International modular vessel loader. The modular vessel loader, Model MH72-4200TPH, will be located at CSX Transportation's existing Rockport Terminal, 22nd Street Causeway and East Bay, Tampa, Hillsborough County, Florida. The universal transverse mercator (UTM) coordinates are Zone 17, 360.1 km East, and 3088.1 km North. The Standard Industrial Classification (SIC) Code for this facility is 4463. The application was received on January 7, 1987, and deemed complete on June 12, 1987.

C. Project Description and Controls

CSX Transportation's shiploading terminal in Tampa, Florida is an existing facility. This facility will be modified by replacing the existing chute for loading phosphate materials into shipholds. The chute will be replaced with a Midwest International modular vessel loader that has a rated capacity of 4,200 tons per hour. The facility presently unloads phosphate materials from railcars and conveys the materials through a storage building to the wharf. The materials are presently loaded into ships by means of a traveling shiploader. The shiploader is equipped with a chute attached to a telescoping boom. Particulate emissions at the point of loading are presently controlled by covering the shiphold with a tarpaulin and venting the captured particulate matter to the No. 7 Baghouse.

The modular vessel loader will be attached to the traveling shiploader and is expected to make the existing tarpaulin and venting system unnecessary. The modular vessel loader is designed to control emissions at the point of loading. The phosphate materials fall through the telescoping tubes of the vessel loader at a controlled rate. Any particulate matter that escapes from the tubes is confined by a shroud that encloses the telescoping tubes. The confined particulate matter is captured in a self-contained filter module located at the top of the loader. The rate at which phosphate materials fall through the telescoping tubes to the pile is controlled by vanes in a Chokefeeder™ module. This reduces dust generation by limiting the free-fall velocity of the phosphate materials. The Chokefeeder™ module is equipped with sensors to maintain an

open drop distance of about 2 feet between the nozzle and the pile of material in the hold. The applicant has agreed to retain the capability to reinstall the present control system if the modular vessel loader fails to comply with the limits imposed by the Department.

The installation of the modular vessel loader with a rated capacity of 4,200 tons per hour will not increase the capacity of the facility. The maximum capacity of the facility is limited to 3,000 tons per hour based on the existing conveyor belt size and maximum drive motor speed. This rate cannot be continuously sustained because of the intermittent nature of railcar unloading, inclement weather, maintenance to the traveling shiploader, movement of the shiploader from vessel to vessel, and movement of the shiploader from hold to hold in order to maintain ship balance. These factors limit the maximum annual hours of actual loading to 5,500 hours and the amount of material loaded to 11,000,000 tons.

II. Rule Applicability

CSX Transportation's shiploading terminal is a major facility for emissions of particulate matter pursuant to Rule 17-2.100(110), FAC.

The proposed project is located in an area classified as nonattainment for particulate matter pursuant to Rule 17-2.410(2)(a)1., FAC.

The proposed project is exempt from the requirements of Rule 17-2.510, FAC, New Source Review for Nonattainment Areas. Rule 17-2.510(2)(d)4.a., FAC, exempts this project because a significant increase in particulate matter emissions will not occur.

III. Summary of Emissions and Air Quality Analysis

A. Summary of Emissions

The only pollutant emitted at the point of loading is particulate matter. The installation of the Midwest International vessel loader will result in an emissions increase of 23 tons per year. This is a contemporaneous increase pursuant to Rule 17-2.510(2)(e)3., FAC. The emissions increase from any modification that occurs within five years of the date the vessel loader begins operation will be added to the 23 tons per year. The total increase will be used to determine the applicability of Rule 17-2.510, FAC, to the future modification.

The particulate matter emission standards applicable to this modification are found in Rule 17-2.650(2)(c)11.b., FAC. This rule requires that no visible emissions (five percent opacity)

occur during loading. Emissions of 10 percent opacity are allowed when the hatch covering and/or conveyor is moved. The applicant has volunteered to comply with a limitation of five percent opacity (no visible emissions) at all times. The rule also requires confinement of the operation and venting of emissions to a control device that limits emissions to 0.03 grain per dry standard cubic foot in the event the visible emission limitation cannot be met. The applicant has committed, in writing, to retain the present control equipment and take whatever steps are necessary to comply with the applicable standards. The Department accepts the emission limitation offered by the applicant as reasonably available control technology. The applicant's commitment is accepted as reasonable assurance that the source will comply with the regulations.

The project is also subject to the emission limiting standards applicable to sources of unconfined emissions. Rule 17-2.610(3), FAC, requires the use of reasonable measures to prevent unconfined emissions of particulate matter. In this case, the company will be required to implement reasonable "house keeping" practices. The reasonable practices shall include but not be limited to clean-up of dust around the traveling shiploader and on the ship deck.

B. Air Quality Analysis

Since the project is exempt from the requirements of Rule 17-2.510, FAC, New Source Review for Nonattainment Areas, an ambient air quality analysis is not required.

IV. Conclusion

The emission limits that will be imposed have been determined to be in compliance with all applicable requirements of Chapter 17-2, FAC. The permitted maximum allowable emission limits should not interfere with the attainment and maintenance of Florida's ambient air quality standards.

The general and specific conditions listed in the proposed construction permit (attached) will ensure compliance with all applicable requirements of Chapter 17-2, FAC.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
CSX Transportation
3701 Causeway Boulevard
Tampa, Florida 33619

Permit Number: AC 29-129122
Expiration Date: December 31, 1987
County: Hillsborough
Latitude/Longitude: 27° 54' 50" N
82° 25' 20" W
Project: Midwest International Modular Vessel Loader Model MH72-4200TPH

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

The construction of a Midwest International modular vessel loader, Model MH72-4200TPH, with the capacity to load 4,200 tons per hour of phosphate materials into shipholds. The modular vessel loader is to replace the existing ship loading chute and the associated emission controls applied to the point of loading. The existing Baghouse No. 7 (Mikro-pulse 1100 J-10 TRH) will continue to control emissions from the Belt 9 to Belt 10 transfer point. The project is to be located at the CSX Transportation Rockport Terminal, Tampa, Hillsborough County, Florida.

The construction and operation shall be in accordance with the attached permit applications, plans, documents, and drawings except as noted in the Specific Conditions of this permit.

Attachments:

1. Application to Construct an Air Pollution Source, DER Form 17-1.202(1).
2. C. H. Fancy's letter dated March 12, 1987.
3. F. C. Edmond's letter dated June 11, 1987.
4. CSX Rockport Bulk Loadout Terminal Midwest Chokefeeder™ Installation.
5. Ron Pair's letter dated May 14, 1987.
6. F. C. Edmond's letter dated November 18, 1986.
7. Victor San Agustin's memorandum dated July 17, 1987.
8. Technical Evaluation and Preliminary Determination dated August 11, 1987.

PERMITTEE:
CSX Transportation

Permit Number: AC 29-129122
Expiration Date: December 31, 1987

GENERAL CONDITIONS:

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

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

GENERAL CONDITIONS:

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

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

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

a. a description of and cause of non-compliance; and

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

GENERAL CONDITIONS:

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

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

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

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

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Phosphate rock shall not be loaded into any vessel at a rate in excess of 3,000 tons per hour and 52,800 tons per day. Diammonium phosphate, monoammonium phosphate, and granular triple superphosphate shall not be loaded into any vessel at a rate in excess of 2,000 tons per hour and 43,200 tons per day.

2. The total quantity of phosphate materials loaded into vessels shall not exceed 11,000,000 tons per rolling 12 month period. The duration of material transfer from the Belt 9 to Belt 10 transfer point and loading of material into vessels shall not exceed 5,500 hours per rolling 12 month period.

3. A calibrated device to continuously measure and record the hourly rate that phosphate materials are loaded into vessels shall be installed. The device and recorder shall be recalibrated at least annually.

SPECIFIC CONDITIONS:

4. Visible emissions at the point where material is being discharged into any vessel and from the modular filter exhaust shall not exceed 5% opacity (no visible emissions) as a 6-minute average.

5. The system used to cover vessel hatches and vent 25,900 dscfm of particulate laden gases to the No. 7 Baghouse shall be retained in good operating condition. This system shall either be reinstalled or equivalent measures (approved by the Department and the HCEPC) taken in the event emissions exceed the levels allowed by Specific Condition No. 4.

6. Particulate emissions from the No. 7 Baghouse shall not exceed 0.03 grain per dscf. Particulate mass emissions from the No. 7 Baghouse shall be limited to:

a. The maximum allowable emissions from the No. 7 Baghouse shall not exceed 3.2 pounds per hour and 14.02 tons per year when receiving gases from the Belt 9 to Belt 10 transfer point.

b. The maximum allowable emissions from the No. 7 Baghouse shall be 9.84 pounds per hour and 43.09 tons per year when receiving gases from the Belt 9 to Belt 10 transfer point and the point of discharge into any vessel.

7. The distance between the loading spout and the receiving surface shall not exceed 2 feet when phosphate material is being discharged into any vessel.

8. All reasonable precautions shall be taken to prevent and control the generation of unconfined particulate matter emissions resulting from the loading of phosphate materials. These precautions shall include, but not be limited to, the regular clean-up of dust accumulations around the traveling shiploader and on the ship deck, using procedures acceptable to the Department and the HCEPC.

9. This modification results in a particulate matter emission increase of 23 tons per year. This increase in emissions shall be contemporaneous with any increase associated with any future modification pursuant to Rule 17-2.510, FAC.

10. The Department has relied upon statements in the Engineer's letter of June 11, 1987; the equipment manufacturer's letter of May 14, 1987; and, the HCEPC's memorandum of July 17, 1987, in issuing this permit.

11. Compliance with Specific Condition Nos. 4 and 6 shall be demonstrated pursuant to all applicable provisions of Rule 17-2.700, FAC.

SPECIFIC CONDITIONS:

a. Initially, compliance with Specific Condition No. 4 shall be demonstrated prior to obtaining an operation permit and annually thereafter using EPA Method 9.

b. Initially, compliance with Specific Condition No. 6 shall be demonstrated prior to obtaining an operation permit and prior to obtaining a renewed operation permit thereafter using EPA Methods 1, 2, 4, and 5.

c. Alternatively, compliance with Specific Condition No. 6 may be demonstrated initially and annually thereafter by using EPA Methods 2 and 9 to demonstrate that visible emissions from the No. 7 Baghouse do not exceed 5% opacity (no visible emissions) as a 6-minute average. If the Department or the HCEPC has reason to believe the mass emission limitation in Specific Condition No. 6 is being exceeded--a mass emission test using EPA Methods 1, 2, 4, and 5 may be required.

d. Compliance with the 9.84 pounds per hour emission limit in Specific Condition No. 6.b. does not need to be demonstrated if emissions from the point of discharge to the ship hold have not been vented to the No. 7 Baghouse since the preceeding compliance test.

e. The Department's SW District office--Air Programs--and the HCEPC--Air Programs--shall be notified at least 15 days in advance of any compliance test.

f. Compliance test reports shall conform to the requirements of Rule 17-2.700(7), FAC, and shall be submitted to the Department's SW District office--Air Programs--and the HCEPC--Air Programs--within 45 days after completion of the test.

g. Phosphate rock shall be loaded into ships at 90% to 100% of the maximum permitted rate during any compliance test.

h. The initial compliance test shall be performed within 30 days after completion of construction.

12. An operation and maintenance plan acceptable to the Department and the HCEPC shall be developed by the applicant. This plan shall be submitted with the application for an operation permit. When approved, the plan shall become a condition of the operation permit.

PERMITTEE:
CSX Transportation

Permit Number: AC 29-129122
Expiration Date: December 31, 1987

SPECIFIC CONDITIONS:

13. After satisfactory completion of the initial compliance test and at least 90 days before the expiration date of this permit, a complete application for an operation permit shall be submitted to the Department's SW District office and the HCEPC. The permittee shall continue to operate in compliance with the terms and conditions of this construction permit until its expiration date or until the issuance of an operation permit.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

_____

Dale Twachtmann, Secretary

PM
7/22/87
Tampa

File Copy

ENVIRONMENTAL PROTECTION COMMISSION
OF
HILLSBOROUGH COUNTY
RODNEY COLSON
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
HAVEN POE
JAMES D. SELVEY
PICKENS C. TALLEY II

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

DER

JUL 24 1987

BAQM

MEMORANDUM

Date 7/17/87

To Mike Harley thru Bill Thomas

From Victor San Agustin thru Jerry Campbell VSA JC

Subject: CSX Transportation's Modified Shiploading System

The purpose of this memo is to request that you incorporate the enclosed source description (Appendix A) and specific conditions (Appendix B) into the construction permit. We further request that you consider using our calculations (Enclosed as Appendix C) as BAQM's justification to issue the construction permit.

Our reason for the latter request is that the applicant's calculation of proposed and existing emissions used control efficiencies of 99.9% (existing) and 99.75% (proposed). We believe the control efficiencies used by the applicant are unrealistic. If you load 3000 tons of 64 BPL rock into a shiphold in an hour and 6000 lbs of PM are emitted, you cannot, given the proposed system, capture all 5,994 lbs and emit only 6 lbs of dust. We feel a 99% control efficiency is realistic. This value was obtained by reference as indicated in Appendix C. The 90% control efficiency for the proposed system is also realistic and was also obtained by reference. Furthermore, our calculations for the proposed system gave the company credit for reducing the material drop height from 40 to 2 ft. A drop height reduction of this magnitude significantly reduces the uncontrolled emissions, so the reduction should be shown in the calculations. This consideration was not shown in the applicant's calculations. The reduction was quantified by multiplying the uncontrolled emission factor by 2/40.

Your consideration of our requests will be appreciated. Also enclosed is an APIS update of points 40HIL29003310 & 11. Should you have any questions, please call me.

VSA/ch
VSACSX

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

APPENDIX A

PERMITTEE:
Mr. W. T. Whale
Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No.:
County: Hillsborough
Expiration Date:
Project: Modified
Shiploading Operation

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

For the modification of CSX Transportation's existing shiploading operation. Modification consists of installing a Midwest international Model MH72 retractable loading spout on the permittee's discharge chute. Maximum drop height will be maintained no greater than 2 feet above the pile. A Midwest choke feeder module will be installed at the end of the spout to lower velocity release of product on the pile. The modification also includes reducing the flow rate of baghouse #7 from 65,000 to 21,000 acfm. Baghouse #7 will still be the same Mikropul Corporation Model Mikro-Pulse 1100 J-10 TRH and will control emissions from the transfer point between conveyor No. 9 and the shiploading gantry only. The proposed modification is exempt from the requirements of New Source Review.

Location: 3701 Causeway Boulevard, Tampa

UTM:17-360.1E 3088.1N NEDS NO: 0033 Point ID:
10-Baghouse #7
11-Shiphold

Replaces Permit No.: A029-62812

APPENDIX B

SPECIFIC CONDITIONS:

1. Visible emissions from the shiphold shall not exceed 5% opacity as requested by the permittee in order to exempt the source from New Source Review requirements.

2. Visible emissions from baghouse #7 shall not exceed 5% opacity. [Subsection 17-2.650(2)(c)11.b.(i), F.A.C.]

3. In order to assure that the proposed modification is exempt from the requirements of New Source Review as contained in Section 17-2.510, F.A.C., the permittee shall comply with the following operating restrictions and emissions limitations:

Source	Emission Limitations	Hours of Operation	Total Materials Throughput
a. Belt to Gantry Transfer Point	0.27 lbs/hr & 0.74 TPY	5500	3000 TPH and 11,000,000 TPY
b. Ship Hold*		5500	3000 TPH and 11,000,000 TPY

*Material drop height at the hold shall not exceed 2 feet.

4. The proposed project shall be permitted under Section 17-2.520, F.A.C., Sources Not Subject to Prevention of Significant Deterioration of Non-attainment requirements, since the proposed emissions will increase by 23 TPY (from 44.8 lbs/hr and 54.8 TPY to 28.3 lbs/hr and 77.7 TPY). This emissions increase is less than the significant emissions increase of 25 TPY. As such, the proposed project would not be considered subject to NSR requirements of Section 17-2.510, F.A.C., New Source Review for Non-attainment Areas.

5. Within 30 days of initial use of the new shiploading system, test the baghouse exhaust and the shiphold for visible emissions. Furthermore, an EPA Method 2 test shall be conducted on the baghouse exhaust. The Method #9 test interval on this source shall be thirty (30) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test data shall be submitted to the Air Section of the Environmental Protection Commission of Hillsborough County within 45 days of testing.

6. Testing of emissions must be accomplished during shiploading of 64 BPL phosphate rock and at approximately the maximum rock handling rate of 3000 TPH. The actual shiploading rate shall be specified in each test result. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data [Section 403.161(1)(c), Florida Statutes].

7. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

8. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Section 17-2.610(3), F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition of wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include but are not limited to regular clean-up of dust around the loading gantry, clean-up of dust on the ship's deck, and limiting the material drop height to less than or equal to 2 feet.

9. If the permittee cannot demonstrate compliance with the emission limitations specified in this permit within 90 days of installation and operation the Midwest loading spout, then the permittee agrees to tarp the ship holds and vent it to the 65,000 acfm Mikro-Pulse baghouse during routine ship loading. If compliance is not demonstrated within 180 days, then the permittee agrees to void this construction permit.

10. An application for an operation permit shall be submitted to the Environmental Protection Commission of Hillsborough County within 45 days of completion of compliance testing or at least 60 days prior to the expiration date of this permit, whichever occurs first. Results of compliance tests required in specific condition 4 of this permit shall be submitted with the operating permit application.

11. An Operation and Maintenance (O & M) plan for the modified shiploading system shall be submitted with the operating permit application. The O and M plan shall be developed in accordance with the requirements of Subsections 17-2.650(2)(d) and (g), F.A.C.

APPENDIX C

Existing Emissions

1. From Baghouse:
   Hourly PM Emission Rate = 0.83 lbs/hr
   Yearly PM Emission Rate = 1.01 TPY

2. From Shiphold:
   Yearly PM Emission Rate =
   $$\frac{2 \text{ lbs}}{\text{ton}} \times \frac{5,381,131 \text{ tons}}{\text{in 1985}} \times [1-0.99*] \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 53.8 \text{ TPY}$$

   Hourly PM Emission Rate =
   $$53.8 \frac{\text{tons}}{\text{yr}} \times 2000 \frac{\text{lbs}}{\text{ton}} \times \frac{1 \text{ yr}}{2445 \text{ hrs}} = 44 \text{ lbs/hr}$$

*Obtained from, Table 4-1, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations

Total Hourly PM Emissions = 44 + 0.83 = 44.83 lbs/hr
Total Yearly PM Emissions = 1.01 + 53.8 = 54.81 TPY

Proposed Emissions

1. From Baghouse:

Hourly PM $= 0.0025 \frac{gr}{dscf} \times 12{,}374 \frac{dscf}{min} \times 60 \frac{min}{hr} \times 1 \frac{lb}{7000\ gr} = 0.27$ lb/hr

Yearly PM $= 0.27 \frac{lbs}{hr} \times 5500 \frac{hrs}{yr} \times 1 \frac{ton}{2000\ lbs} = 0.74$ TPY

2. From Ship Hold:

Yearly PM $= (2 \times 2/40) \frac{lbs}{ton}$ * $\times (1-0.86)$ ** $\times 11{,}000{,}000 \frac{tons}{yr} \times 1 \frac{ton}{2000\ lbs}$

$= 77$ TPY

Hourly PM $= 77 \frac{tons}{year} \times 1 \frac{yr}{5500\ hrs} \times \frac{2000\ lbs}{1\ ton} = 28$ lbs/hr

* 2 lb/ton AP42 emission factor was multiplied by 2/40 to give CSX credit for a reduced drop height of 2 ft. This is consistent with the equation used to quantify transfer point emissions of bulk commodities (see Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations). The emissions are directly proportional to drop height, so a twenty fold decrease in drop height should result in an equivalent decrease in emissions. It should be noted that the equations from this report were the basis of the TECO Gannon Coal Yard application which was reviewed and approved by the CAPS. This was not accounted for in previous calculations.

**Obtained from Table 4-2 and 4-3, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations. Efficiencies vary from 70-90%. 86% was considered to be more realistic compared to 99.75%.

Change in PM Emissions

Increase/Decrease = Proposed Emissions - Existing Emissions

= 77.74 - 54.81

= 22.93 TPY Increase

cc'd: entire packet Mike Healy } 7/24/87 mr
Bill Thomas }

FACILITY SOURCE ID: 40HIL29003311

SOURCE INFORMATION RECORD

***** CONSTRUCTION PERMIT/PPS INFORMATION *****
PERMIT #: .... - ..... PPS #: .... FEE PAID: ..... (PERMIT ONLY)
DATE ISSUED: .. / .. / .. DATE EXPIRES: .. / .. / ..
APP COMPLETE: .. / .. / ..

***** OPERATION PERMIT INFORMATION *****
PERMIT #: .... - ..... FEE PAID: ..... AOR REQUIRED: . (Y OR N)
DATE ISSUED: .. / .. / .. DATE EXPIRES: .. / .. / ..

***** SOURCE DESCRIPTION/TRACKING INFORMATION *****
DESCRIPTION: LOADING OF SHIPHOLD AT CSX.
STATUS: A = ACTIVE # OF SCC: 001 # OF POLLUTANT: 002 MAJOR SRC: . (Y OR N)
INITIAL CONSTRUCTION DATE: .. / .. / .. TYPE: IO = **********
SIC: 4463 = MARINE CARGO HANDLING
NSPS: ... NESHAP: ... 111D: ... PSD: ... NAA/NSR: ... RACT: PM
COMMENT: CONTROLLED BY RETRACTIVE ACTION OF THE NEW SPOUT.NEW SPOUT I
S EQUIPPED WITH A MIDWESTERN CHOKE FEEDER.
START UP DATE: .. / .. / .. SHUT DOWN DATE: .. / .. / ..

SOURCE SCHEDULE/RATE RECORD

***** OPERATING SCHEDULE INFORMATION *****
TYPICAL OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR)
TYPICAL % OPERATING BY SEASON: 25 (DJF) 25 (MAM) 25 (JJA) 25 (SON)
PERMITTED OPERATING SCHEDULE: 15 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 5500 (HR/YR)
AOR YR: 87 OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 8736 (HR/YR)

***** OPERATING RATE INFORMATION *****
MAX PROCESS RATE: 0003000 UNITS: TPH ROCK
MAX PRODUCTION RATE: 0003000 UNITS: TONU

SOURCE EMISSION POINT RECORD

***** EMISSION POINT INFORMATION *****
EMISSION POINT TYPE: 1 = SINGLE POINT
STACK HEIGHT: 060 (FT) EXIT DIA: 09 . 0 (FT) EXIT TEMP: 0078 (F)
ACTUAL VOLUME FLOW RATE: 0000001 (ACFM) DRY STANDARD FLOW RATE: 0000001 (DSCFM)
EXIT VEL: .... (FT/SEC) NONSTK EMIS HT: 0040 (FT) BLDG HT: .... WD: .... (FT)
POINT UTM: EAST: ... . .. (KM) NORTH: .... (KM) GEP STK HT: ... (FT)
COMMENT: EMISSION POINT IS THE HOLD OF A SHIP

***** CONTROL EQUIPMENT INFORMATION *****
CONTROL A: MIDWESTERN LOADER EQUIPPED WITH A CHOKEFEEDER.
CONTROL B: .....
CAPITAL COST: A $ ..... B $ ..... TOTAL OPER COST $ ..... AOR YR: 87

FACILITY SOURCE ID: 40HIL29003311

SOURCE SCC RECORD

SCC #: 3-05-049-03 = MIN PROD PHOSPHATE ROCK TRANSFER/STORAGE
UNITS: TONP = TONS PROCESSED MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 5381431
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: .....
ACTUAL AOR YR: 87 ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: .....
COMMENTS: LOADING OF PHOSPHATE ROCK AND PRODUCTS.

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: PM = PARTICULATE MATTER % EFF: .. . .
PRI: 046 = PROCESS EXCHANGE SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00028 . 0000 (LB/HR) 000077 . 0000 (TON/YR)
ESTIMATED EMISSION: 000028 . 0000 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000010 . 0000 (TON/YR) AOR CODE: . AOR YR: 87
ALLOWABLE EMISSION: 00028 . 0000 (LB/HR) 000077 . 0000 (TON/YR)
ALLOWABLE EMISSION: ....(.....) OTHER UNIT
REGULATION CODE: ESCNAA = VOL EMISS LIM/NAA AVOID CEM?: N (Y OR N)
TEST FREQUENCY: 1 = ANNUALLY FREQUENCY BASE DATE: 07 / 17 / 87
COMMENT: 650(2)(C)11.

SOURCE VE/TEST RECORDS

***** VE INFORMATION *****
POLLUTANT ID: VE = VISIBLE EMISSIONS
ALLOW % OPACITY: NORMAL: 010 EXCEPT: ... TIME: ... (MIN)
REG CODE: RACT = REASON AVAILB CONTROL TCH CEM ? N (Y OR N)
TEST FREQ: 6 = EVERY 6 MONTHS FREQ BASE DATE: 04 / 02 / 85

***** TEST INFORMATION *****
CURRENT TEST DATE: 03 / 03 / 87 NEXT TEST DATE: 09 / 30 / 87
OBSERVER NAME: R.OLIVER-AO
TEST LENGTH: 030 (MIN) TEST PASS ? Y (Y OR N)
TEST % OPACITY: NORMAL: ... EXCEPT: ... TIME: ... (MIN)
COMMENTS: 1800TPH
.....
.....

FACILITY SOURCE ID: 40HIL29003310

SOURCE INFORMATION RECORD

***** CONSTRUCTION PERMIT/PPS INFORMATION *****
PERMIT #: .... - ..... PPS #: .... FEE PAID: ..... (PERMIT ONLY)
DATE ISSUED: .. / .. / .. DATE EXPIRES: .. / .. / ..
APP COMPLETE: .. / .. / ..

***** OPERATION PERMIT INFORMATION *****
PERMIT #: A029 - -62812 FEE PAID: ..... AOR REQUIRED: . (Y OR N)
DATE ISSUED: 12 / 01 / 82 DATE EXPIRES: 11 / 29 / 87

***** SOURCE DESCRIPTION/TRACKING INFORMATION *****
DESCRIPTION: BELT TO GANTRY TRANSFER POINT. CONTROLLED BY BAGHOUSE #7.
STATUS: A = ACTIVE # OF SCC: 001 # OF POLLUTANT: 002 MAJOR SRC: . (Y OR N)
INITIAL CONSTRUCTION DATE: .. / .. / .. TYPE: .. = ...
SIC: 4463 = MARINE CARGO HANDLING
NSPS: ... NESHAP: ... 111D: ... PSD: ... NAA/NSR: ... RACT: PM
COMMENT: .....
.....
START UP DATE: .. / .. / .. SHUT DOWN DATE: .. / .. / ..

SOURCE SCHEDULE/RATE RECORD

***** OPERATING SCHEDULE INFORMATION *****
TYPICAL OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR)
TYPICAL % OPERATING BY SEASON: 25 (DJF) 25 (MAM) 25 (JJA) 25 (SON)
PERMITTED OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 8760 (HR/YR)
AOR YR: 86 OPERATING SCHEDULE: 24 (HR/DAY) 7 (DAY/WK) 52 (WK/YR) 8760 (HR/YR)

***** OPERATING RATE INFORMATION *****
MAX PROCESS RATE: 0003000 UNITS: TPH ROCK
MAX PRODUCTION RATE: ..... UNITS: OTHER

SOURCE EMISSION POINT RECORD

***** EMISSION POINT INFORMATION *****
EMISSION POINT TYPE: 1 = SINGLE POINT
STACK HEIGHT: 054 (FT) EXIT DIA: 06 . 0 (FT) EXIT TEMP: 0077 (F)
ACTUAL VOLUME FLOW RATE: 0021000 (ACFM) DRY STANDARD FLOW RATE: 0012374 (DSCFM)
EXIT VEL: 0012 (FT/SEC) NONSTK EMIS HT: 0000 (FT) BLDG HT: .... WD: .... (FT)
POINT UTM: EAST: ... . .. (KM) NORTH: .... (KM) GEP STK HT: ... (FT)
COMMENT: EMISSION POINT IS A BAGHOUSE EXHAUST.

***** CONTROL EQUIPMENT INFORMATION *****
CONTROL A: MIKROPUL CORPORATION MODEL MIKROPULS 1100J-10 TRH
CONTROL B: .....
CAPITAL COST: A $ ..... B $ ..... TOTAL OPER COST $ ..... AOR YR: 86

FACILITY SOURCE ID: 40HIL29003340

SOURCE SCC RECORD

SCC #: 3-05-019-03 = MIN PROD PHOSPHATE ROCK TRANSFER/STORAGE
UNITS: TONP = TONS PROCESSED MAX HOURLY RATE: **** . *** ANNUAL LIMIT: 5381131
ESTIMATE ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: .....
ACTUAL AOR YR: 86 ANNUAL RATE: ******* %S: . . .. %ASH: .. . . MMBTU: .....
COMMENTS: CONVEYING OF PHOSPHATE ROCKS

SOURCE POLLUTANT RECORD

****** POLLUTANT/CONTROL INFORMATION ******
POLLUTANT ID: PM = PARTICULATE MATTER % EFF: 99 . 0
PRI: 018 = FABRIC FILTER LOW TEMP SEC: ... = ...

***** EMISSION INFORMATION *****
POTENTIAL EMISSION: 00000 . 2700 (LB/HR) 000000 . 7400 (TON/YR)
ESTIMATED EMISSION: 000000 . 8300 (TON/YR) EST CODE: *
ACTUAL EMISSION: 000019 . 8000 (TON/YR) AOR CODE: * AOR YR: 86
ALLOWABLE EMISSION: 00000 . 2700 (LB/HR) 000000 . 7400 (TON/YR)
ALLOWABLE EMISSION: 00000 . 270000(LB/HR) OTHER UNIT
REGULATION CODE: ESCNAA = VOL EMISS LIM/NAA AVOID CEM?: N (Y OR N)
TEST FREQUENCY: 1 = ANNUALLY FREQUENCY BASE DATE: 08 / 08 / 85
COMMENT: .....

SOURCE TEST RECORD

CURRENT TEST DATE: 08 / 08 / 84 NEXT TEST DATE: 08 / 08 / 85
TEAM NAME: 2
MAX PROCESS RATE: 0003000 ACTUAL: ..... UNITS: .....
MAX PRODUCTION RATE: ..... ACTUAL: 0003000 UNITS: TONP
POLLUTANT ID: PM = PARTICULATE MATTER TEST PASS? . (Y OR N)
PERMIT ALLOWABLE EMIS: 00000 . 270000 UNITS: LB/HR
TEST ALLOW EMIS: 00001 . 600000 TEST ACT EMIS: 00000 . 830000
UNITS: LB/HR AUDIT TYPE: .
% TEST ACTUAL BELOW (-) OR ABOVE (+) TEST ALLOWABLE: ... . .. SIGN: .
COMMENTS: .650(2)(C)1
.....
.....

FACILITY SOURCE ID: 40HIL29003310

SOURCE VE/TEST RECORDS

***** VE INFORMATION *****

POLLUTANT ID: VE = VISIBLE EMISSIONS
ALLOW % OPACITY: NORMAL: 005 EXCEPT: ... TIME: ... (MIN)
REG CODE: RACT = REASON AVAILB CONTROL TCH CEM ? N (Y OR N)
TEST FREQ: 6 = EVERY 6 MONTHS FREQ BASE DATE: 04 / 02 / 85

***** TEST INFORMATION *****

CURRENT TEST DATE: 06 / 18 / 87 NEXT TEST DATE: 10 / 02 / 87
OBSERVER NAME: C. GONZALEZ-HCEPC
TEST LENGTH: 012 (MIN) TEST PASS ? N (Y OR N)
TEST % OPACITY: NORMAL: 003 EXCEPT: ... TIME: ... (MIN)
COMMENTS: 1800TPH

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FOSSIL

TECHNICAL GUIDE FOR ESTIMATING FUGITIVE DUST IMPACTS FROM COAL HANDLING OPERATIONS

By
George C. Howroyd

September 1984

Work Performed Under Contract No. AC01-80RG10312

Dames & Moore
Atlanta, Georgia

Technical Information Center
Office of Scientific and Technical Information
United States Department of Energy

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(DE85010939)
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TECHNICAL GUIDE FOR ESTIMATING FUGITIVE DUST IMPACTS FROM COAL HANDING OPERATIONS

by

George C. Howroyd

Dames & Moore
455 E. Paces Ferry Road
Atlanta, Georgia 30363

CONTRACT NO. DE-AC01-80RG-10312

TASK ASSIGNMENT NO. 007

PREPARED FOR

U.S. DEPARTMENT OF ENERGY
OFFICE OF FUELS PROGRAMS
DIVISION OF COAL AND ELECTRICITY
1000 INDEPENDENCE AVENUE, SW
WASHINGTON, DC 20585

SEPTEMBER 1984

ABSTRACT

The use of coal at power plants and other fuel-burning installations can result in fugitive dust emissions generated by the handling and storage of coal. At some installations, the storage and handling of fly ash and limestone can also result in fugitive dust emissions. To aid analysts, planners, and managers in evaluating the significance of fugitive dust emissions, a Technical Guide has been developed.

The development of the Technical Guide was based on a comprehensive review of existing literature on fugitive dust emission sources and emission control measures. From this review, recommended emission factors were developed for 13 different emission source categories. To account for the use of dust controls, the Technical Guide recommends ranges of control efficiencies that can be expected for the many types of control methods appropriate for the suppression of fugitive dust emissions.

The Technical Guide makes specific recommendations on modeling analysis procedures that take into account such factors as the size and configuration of the emission source, meteorological variations, and dust settling and deposition. These dispersion analysis techniques are applied to a realistic example problem as an aid to the Technical Guide user. The example problem is first assessed by a conservative screening method using diagrams contained in the Technical Guide. The example problem is also considered through a more elaborate modeling approach so that the Technical Guide user can gain an understanding of the procedures involved when detailed modeling is preferred or required.

Fugitive Dust Source: BARGE/SHIP UNLOADING

Batch unloading operations (clamshell type unloader)

$$EF^* = \frac{0.0018\ (\frac{S}{5})\ (\frac{u}{5})\ (\frac{H}{5})}{(\frac{M}{2})^2\ (\frac{Y}{6})^{1/3}} \text{ lb/ton}$$

Continuous unloading operations (bucketwheel, bucket elevator, etc.)

$$EF^* = \frac{0.0018\ (\frac{S}{5})\ (\frac{u}{5})\ (\frac{H}{10})}{(\frac{M}{2})^2} \text{ lb/ton}$$

where: EF = uncontrolled suspended particulate (<30 <μm diameter) emissions (lb/ton of material unloaded)
S = material silt content (%)
u = wind speed (mph)
H = material drop height from unloading device (ft)
M = material moisture content (%)
Y = batch dumping device capacity (yd^3)

* Emission factors developed by Bohn, et al. (1978), and Cowherd, et al. (1979a) of Midwest Research Institute (MRI).

Reliability Rating: Above Average

Figure 3-4. Predictive Fugitive Dust Emission Factors for Batch and Continuous Barge/Ship Unloading Operation

Fugitive Dust Source: CONVEYOR TRANSFER STATION (ENCLOSED)

$$EF^* = \frac{0.00018 \left(\frac{S}{5}\right) \left(\frac{u}{5}\right) \left(\frac{H}{10}\right)}{\left(\frac{M}{2}\right)^2} \text{ lb/ton}$$

where: EF = uncontrolled* suspended particulate (<30 <μm diameter) emissions (lb/ton of material transferred)
S = material silt content (%)
u = wind speed (mph)
H = material drop height (ft)
M = material moisture content (%)

*Uncontrolled emissions with the exception of the conveyor transfer station enclosure which is projected to have an effective control efficiency of 90%. For an open conveyor transfer operation, increase emissions by a factor of 10. Emission factor developed by Bohn, et al. (1978) and Cowherd, et al. (1979a)

Reliability Rating: Average

Figure 3-5. Predictive Fugitive Dust Emission Factor for Conveyor Transfer Station Operation

Fugitive Dust Source: STORAGE PILE LOAD-IN/LOAD-OUT OPERATION

Continuous unloading operations (bucketwheel, bucket elevator, etc.)

$$EF^* = \frac{0.0018\ (\frac{S}{5})\ (\frac{u}{5})\ (\frac{H}{10})}{(\frac{M}{2})^2} \text{ lb/ton}$$

Batch unloading operations (clamshell type unloader)

$$EF^* = \frac{0.0018\ (\frac{S}{5})\ (\frac{u}{5})\ (\frac{H}{5})}{(\frac{M}{2})^2\ (\frac{Y}{6})^{1/3}} \text{ lb/ton}$$

where: EF = uncontrolled suspended particulate (<30 μm diameter) emissions (lb/ton of material unloaded)
S = material silt content (%)
u = wind speed (mph)
H = material drop height from unloading device (ft)
M = material moisture content (%)
Y = batch dumping device capacity (yd^3)

*Emission factors developed by Bohn, et al. (1978), and Cowherd, et al. (1979a) of Midwest Research Institute (MRI).

Reliability Rating: Above Average

Figure 3-6. Predictive Fugitive Dust Emission Factors for Continuous and Batch Storage Pile Load-In and Load-Out Operations

TABLE 4-2

ESTIMATED DUST CONTROL EFFICIENCIES FOR CONVEYING AND TRANSFER OPERATIONS

Activity	Control Method	Estimated Control Efficiencies (%)	References
A. Conveyor Systems	- partial enclosure	70	Bohn, et al. (1978), Currier & Neal (1979)
		90	EPA (1979a)
	- full enclosure	99	Bohn, et al. (1978), TRW (1982)
		100	EPA (1979a)
	- wet conveyor belt	15	Jutze, et al. (1977)
B. Conveyor Transfer Stations	- full enclosure	70	Bohn, et al. (1978)
		90	Currier & Neal (1979), Szabo (1978)
	- enclosure with baghouse	99	Bohn, et al. (1978), EPA (1979a), TRW (1982)
		99.5	Davis, et al. (1981)
	- water spray	35	Jutze, et al. (1977)
		50	Currier & Neal (1979)
		70-95	Bohn, et al. (1978)
	- micron droplet spray	90	Kretch (1983)
	- chemical spray	85	Currier & Neal (1979)
	- foam	75	Jutze, et al. (1977)
	- micron-sized foam spray	99	Cole & Ayers (1983)

TABLE 4-3

ESTIMATED DUST CONTROL EFFICIENCIES FOR
STORAGE PILE LOAD-IN OPERATIONS

Activity	Control Method	Estimated Control Efficiencies (%)	References
Storage Pile Load-In			
	A. Conveyor Systems		
	- general enclosure	70-99	Jutze, et al. (1977)
	- baghouse on silo	95	EPA (1979a)
	- stone ladder	80	Bohn, et al. (1978)
	- wind guards	50	Bohn, et al. (1978)
	B. Spray Systems		
	- chemical wetting agents	80-90	Jutze, et al. (1977), Currier & Neal (1979)
	- water spray	50	Currier & Neal (1979), Ohio EPA (1980)
	- micron-sized foam spray	99	Cole & Ayers (1983)
	- micron-droplet spray	90	Kretch (1983)
	C. Reduce Drop Distance		
	- variable height stacker	25	Bohn, et al. (1978), TRW (1982)
	- telescopic chute	75	Bohn, et al. (1978), Jutze, et al. (1977)
		95	EPA (1979a)
	- telescopic chute plus chemical dust supressant	75	Davis, et al. (1981)

ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY
AIR POLLUTION CONTROL PROGRAM
1410 N. 21st STREET
TAMPA, FL 33605

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Mr. Mike Harley
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

PM
7.17.87
Tampa

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ENVIRONMENTAL PROTECTION COMMISSION
OF
HILLSBOROUGH COUNTY
RODNEY COLSON
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RUBIN E. PADGETT
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HAVEN POE
JAMES D. SELVEY
PICKENS C. TALLEY II

ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

DER

JUL 20 1987

BAQM

MEMORANDUM

Date 7/17/87

To Mike Hanley thru Bill Thomas

From Victor San Agustin thru Jerry Campbell VSA

Subject: CSX Transportation's Modified Shiploading System

The purpose of this memo is to request that you incorporate the enclosed source description (Appendix A) and specific conditions (Appendix B) into the construction permit. We further request that you consider using our calculations (Enclosed as Appendix C) as BAQM's justification to issue the construction permit.

Our reason for the latter request is that the applicant's calculation of proposed and existing emissions used control efficiencies of 99.9% (existing) and 99.75% (proposed). We believe the control efficiencies used by the applicant are unrealistic. If you load 3000 tons of 64 BPL rock into a shiphold in an hour and 6000 lbs of PM are emitted, you cannot, given the proposed system, capture all 5,994 lbs and emit only 6 lbs of dust. We feel a 99% control efficiency is realistic. This value was obtained by reference as indicated in Appendix C. The 90% control efficiency for the proposed system is also realistic and was also obtained by reference. Furthermore, our calculations for the proposed system gave the company credit for reducing the material drop height from 40 to 2 ft. A drop height reduction of this magnitude significantly reduces the uncontrolled emissions, so the reduction should be shown in the calculations. This consideration was not shown in the applicant's calculations. The reduction was quantified by multiplying the uncontrolled emission factor by 2/40.

Your consideration of our requests will be appreciated. Also enclosed is an APIS update of points 40HIL29003310 & 11. Should you have any questions, please call me.

VSA/ch
VSACSX

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

813-985-7402
SunCom - 570-8000

APPENDIX A

PERMITTEE:
Mr. W. T. Whale
Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No.:
County: Hillsborough
Expiration Date:
Project: Modified
Shiploading Operation

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

For the modification of CSX Transportation's existing shiploading operation. Modification consists of installing a 4200 TPH Midwest international Model MH72 retractable loading spout on the permittee's discharge chute. Maximum drop height will be maintained no greater than 2 feet above the pile. A Midwest choke feeder module will be installed at the end of the spout to lower velocity release of product on the pile. The modification also includes reducing the flow rate of baghouse #7 from 65,000 to 21,000 acfm. Baghouse #7 will still be the same Mikropul Corporation Model Mikro-Pulse 1100 J-10 TRH and will control emissions from the transfer point between conveyor No. 9 and the shiploading gantry only. The proposed modification is exempt from the requirements of New Source Review.

Location: 3701 Causeway Boulevard, Tampa

UTM:17-360.1E 3088.1N NEDS NO: 0033 Point ID:
10-Baghouse #7
11-Shiphold

Replaces Permit No.: A029-62812

APPENDIX B

SPECIFIC CONDITIONS:

1. Visible emissions from the shiphold shall not exceed 5% opacity as requested by the permittee in order to exempt the source from New Source Review requirements.

2. Visible emissions from baghouse #7 shall not exceed 5% opacity. [Subsection 17-2.650(2)(c)11.b.(i), F.A.C.]

3. In order to assure that the proposed modification is exempt from the requirements of New Source Review as contained in Section 17-2.510, F.A.C., the permittee shall comply with the following operating restrictions and emissions limitations:

Source	Emission Limitations	Hours of Operation	Total Materials Throughput
a. Belt to Gantry Transfer Point	0.27 lbs/hr & 0.74 TPY	5500	3000 TPH and 11,000,000
b. Ship Hold*	28 lbs/hr & 77 TPY	5500	TPY for each source

*Material drop height at the hold shall not exceed 2 feet.

4. The proposed project shall be permitted under Section 17-2.520, F.A.C., Sources Not Subject to Prevention of Significant Deterioration of Non-attainment requirements, since the proposed emissions will increase by 23 TPY (from 44.8 lbs/hr and 54.8 TPY to 28 lbs/hr and 77 TPY). This emissions increase is less than the significant emissions increase of 25 TPY. As such, the proposed project would not be considered subject to NSR requirements of Section 17-2.510, F.A.C., New Source Review for Non-attainment Areas.

5. Within 30 days of initial use of the new shiploading system, test the baghouse exhaust and the shiphold for visible emissions. Furthermore, an EPA Method 2 test shall be conducted on the baghouse exhaust. The Method #9 test interval on this source shall be thirty (30) minutes. Testing procedures shall be consistent with the requirements of Section 17-2.700, F.A.C. Two copies of the test data shall be submitted to the Air Section of the Environmental Protection Commission of Hillsborough County within 45 days of testing.

6. Testing of emissions must be accomplished during shiploading of 64 BPL phosphate rock and at approximately the maximum rock handling rate of 3000 TPH. The actual shiploading rate shall be specified in each test result. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data [Section 403.161(1)(c), Florida Statutes].

7. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

8. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Section 17-2.610(3), F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition of wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include but are not limited to regular clean-up of dust around the loading gantry, clean-up of dust on the ship's deck, and limiting the material drop height to less than or equal to 2 feet.

9. An application for an operation permit shall be submitted to the Environmental Protection Commission of Hillsborough County within 45 days of completion of compliance testing or at least 60 days prior to the expiration date of this permit, whichever occurs first. Results of compliance tests required in specific condition 4 of this permit shall be submitted with the operating permit application.

10. An Operation and Maintenance (O & M) plan for the modified shiploading system shall be submitted with the operating permit application. The O and M plan shall be developed in accordance with the requirements of Subsections 17-2.650(2)(d) and (g), F.A.C.

APPENDIX C

Existing Emissions

1. From Baghouse:
   Hourly PM Emission Rate = 0.83 lbs/hr
   Yearly PM Emission Rate = 1.01 TPY

2. From Shiphold:
   Yearly PM Emission Rate =

$$2\ \frac{\text{lbs}}{\text{ton}} \times 5{,}381{,}131\ \text{tons in 1985} \times [1-0.99^{*}] \times \frac{1\ \text{ton}}{2000\ \text{lbs}} = 53.8\ \text{TPY}$$

   Hourly PM Emission Rate =

$$53.8\ \frac{\text{tons}}{\text{yr}} \times 2000\ \frac{\text{lbs}}{\text{ton}} \times \frac{1\ \text{yr}}{2445\ \text{hrs}} = 44\ \text{lbs/hr}$$

*Obtained from, Table 4-1, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations

Total Hourly PM Emissions = 44 + 0.83 = 44.83 lbs/hr
Total Yearly PM Emissions = 1.01 + 53.8 = 54.81 TPY

Proposed Emissions

1. From Baghouse:

$$\text{Hourly PM} = 0.0025 \frac{\text{gr}}{\text{dscf}} \times 12{,}374 \frac{\text{dscf}}{\text{min}} \times 60 \frac{\text{min}}{\text{hr}} \times 1 \frac{\text{lb}}{7000 \text{ gr}} = 0.27 \text{ lbs/hr}$$

$$\text{Yearly PM} = 0.27 \frac{\text{lbs}}{\text{hr}} \times 5500 \frac{\text{hrs}}{\text{yr}} \times 1 \frac{\text{ton}}{2000 \text{ lbs}} = 0.74 \text{ TPY}$$

2. From Ship Hold:

$$\text{Yearly PM} = (2 \times 2/40) \frac{\text{lbs}}{\text{ton}}^{*} \times (1-0.86)^{**} \times 11{,}000{,}000 \frac{\text{tons}}{\text{yr}} \times 1 \frac{\text{ton}}{2000 \text{ lbs}} = 77 \text{ TPY}$$

$$\text{Hourly PM} = 77 \frac{\text{tons}}{\text{year}} \times 1 \frac{\text{yr}}{5500 \text{ hrs}} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} = 28 \text{ lbs/hr}$$

* 2 lb/ton emission factor was multiplied by 2/40 to give CSX credit for reduced drop height. The proposed drop height is 2 ft. This was not accounted for in previous calculations.

**Obtained from Table 4-2 and 4-3, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations. Efficiencies vary from 70 - 90%. 86% was considered to be more realistic compared to 99.75%.

Change in PM Emissions

Increase/Decrease = Proposed Emissions - Existing Emissions

= 77.74 - 54.81

= 22.93 TPY Increase

CC: Mike Harley
Bill Homes } 7/24/87 (mm)

Environmental Protection Commission
of
Hillsborough County

1900 9th Avenue
Tampa, Florida 33605

Mr. Mike Harley, CAPS Engineer
Bureau of Air Quality Management
Florida Dept. of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee,FL 32399-2400

DER
JUL 6 1987
BAQM

PM
2 Jul
Tampa, FL

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Existing Emissions

1. From Baghouse:

Hourly PM Emission Rate = 0.83 Lbs/hr

Yearly PM Emission Rate = 1.01 TPY

2. From Ship Hold:

$$\text{Yearly PM Emission Rate} = \frac{2\text{ Lbs}}{\text{ton}} \times \frac{5{,}381{,}131\text{ tons}}{\text{in 1985}} \times [1 - 0.99]^{*} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 53.8\text{ TPY}$$

$$\text{Hourly PM Emission Rate} = \frac{53.8\text{ tons}}{\text{yr}} \times \frac{2000\text{ lbs}}{\text{ton}} \times \frac{1\text{ yr}}{2445\text{ hrs}} = 44\text{ Lbs/hr}$$

*Obtained from, Table 4-1, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations [Enclosed].

Total Hourly PM Emissions = 44 + 0.83 = 44.83 Lbs/hr

Total Yearly PM Emissions = 1.01 + 53.8 = 54.81 TPY

Mike Harley: RE: CSX Shiploading Project

Here are the calculations you requested. Hope they're self explanatory. Any questions, please call at SC571-5531

DER
JUL 6 1987
Victor BAQM

cc. Jim Estler (Tampa Off)
Mike Harley

Proposed Emissions

1. From Baghouse:

$$\text{Hourly PM} = 0.0025\ \frac{gr}{dscf} \times 12{,}374\ \frac{dscf}{min} \times \frac{60\ min}{hr} \times \frac{1\ Lb}{7000\ gr} = 0.27\ Lbs/hr$$

$$\text{Yearly PM} = 0.27\ \frac{Lbs}{hr} \times 5500\ \frac{hrs}{yr} \times \frac{1\ ton}{2000\ Lbs} = 0.74\ TPY$$

2. From Ship Hold:

$$\text{Yearly PM} = \left[2 \times \frac{2}{40}\right] \frac{Lbs}{ton}^{*} (1 - 0.86)^{**} \times 11{,}000{,}000\ \frac{tons}{yr} \times \frac{1\ ton}{2000\ lbs} = 77\ TPY$$

$$\text{Hourly PM} = 77\ \frac{tons}{yr} \times \frac{1\ yr}{5500\ hrs} \times \frac{2000\ lb}{1\ ton} = 28\ Lbs/hr$$

*2 Lbs/Ton factor was multiplied by 2/40 to give CSX credit for a reduced drop height. 40 ft = existing drop height. 2 ft = proposed drop height. This was not accounted for in previous calculations.

**Obtained from Table 4-2 and 4-3, Technical Guide for Estimating Fugitive Dust Impacts from Coal Handling Operations [Enclosed]. Efficiencies vary from 70-90%. 86% was felt to be more realistic compared to 99.75%.

Change in PM Emissions

$$\begin{aligned} \text{Change} &= \text{Proposed} - \text{Existing} \\ &= 77.74 - 54.81 \\ &= 22.93\ TPY \end{aligned}$$

TABLE 4-1

ESTIMATED DUST CONTROL EFFICIENCIES FOR UNLOADING OPERATIONS

Activity	Control Method	Estimated Control Efficiencies (%)	References
A. Railcar Unloading	- enclosure with bag filter	99	Bohn, et al. (1978), Currier & Neal (1979)
	- enclosure with chemical sprays	95	Davis, et al. (1981)
	- water sprays	80 95	Currier & Neal (1979), Bohn, et al. (1978) EPA (1979a)
	- telescopic chutes & chemical wetting	75	Davis, et al. (1981)
B. Barge/Ship Unloading	- water sprays	80	Currier & Neal (1979)
	- chemical wetting	80	Davis, et al. (1981)
	- telescopic chute & chemical wetting	75	Davis, et al. (1981)
	- partial enclosure with baghouse	90-99	TRW (1982)
C. Truck Unloading	- enclosure with control device	90-95	Ohio EPA (1980)
	- negative aspiration over dump area	85	EPA (1979a)
	- water sprays	50	Collins (1979), EPA (1979a)

TABLE 4-3

ESTIMATED DUST CONTROL EFFICIENCIES FOR
STORAGE PILE LOAD-IN OPERATIONS

Activity	Control Method	Estimated Control Efficiencies (%)	References
Storage Pile Load-In			
	A. Conveyor Systems		
	- general enclosure	70-99	Jutze, et al. (1977)
	- baghouse on silo	95	EPA (1979a)
	- stone ladder	80	Bohn, et al. (1978)
	- wind guards	50	Bohn, et al. (1978)
	B. Spray Systems		
	- chemical wetting agents	80-90	Jutze, et al. (1977), Currier & Neal (1979)
	- water spray	50	Currier & Neal (1979), Ohio EPA (1980)
	- micron-sized foam spray	99	Cole & Ayers (1983)
	- micron-droplet spray	90	Kretch (1983)
	C. Reduce Drop Distance		
	- variable height stacker	25	Bohn, et al. (1978), TRW (1982)
	- telescopic chute	75	Bohn, et al. (1978), Jutze, et al. (1977)
		95	EPA (1979a)
	- telescopic chute plus chemical dust supressant	75	Davis, et al. (1981)

TABLE 4-2

ESTIMATED DUST CONTROL EFFICIENCIES FOR CONVEYING AND TRANSFER OPERATIONS

Activity	Control Method	Estimated Control Efficiencies (%)	References
A. Conveyor Systems	- partial enclosure	70	Bohn, et al. (1978), Currier & Neal (1979)
		90	EPA (1979a)
	- full enclosure	99	Bohn, et al. (1978), TRW (1982)
		100	EPA (1979a)
	- wet conveyor belt	15	Jutze, et al. (1977)
B. Conveyor Transfer Stations	- full enclosure	70	Bohn, et al. (1978)
		90	Currier & Neal (1979), Szabo (1978)
	- enclosure with baghouse	99	Bohn, et al. (1978), EPA (1979a), TRW (1982)
		99.5	Davis, et al. (1981)
	- water spray	35	Jutze, et al. (1977)
		50	Currier & Neal (1979)
		70-95	Bohn, et al. (1978)
	- micron droplet spray	90	Kretch (1983)
	- chemical spray	85	Currier & Neal (1979)
	- foam	75	Jutze, et al. (1977)
	- micron-sized foam spray	99	Cole & Ayers (1983)

PM
6-11-87
Tam, FL

CM: P-591-829-710

file copy

CSX TRANSPORTATION

RAIL TRANSPORT GROUP

P.O. Box 45052
Jacksonville, FL 32232-5052

DER

JUN 12 1987

BAQM

June 11, 1987
AZA 881.9 - FCE/ehc

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

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

ATTENTION: Mr. Mike Harley

Dear Mr. Fancy:

Reference is made to CSX Transportation's application to modify its Rockport Terminal ship loading system and to your letter of March 12, 1987 and subsequent meetings with Messrs. Bill Thomas and Mike Harley, of your office, in regard thereto.

In the most recent meeting, on June 2, 1987, a descriptive brochure on the proposed equipment and a manufacturer's warrantee guaranteeing operation at 5% opacity was handed to Mr. Harley.

Although the base unit to be installed is rated at 4200 tons per hour, its actual maximum throughput is limited to a theoretical 3000 TPH by the design of the delivery system which in turn is governed by conveyor belt size and maximum drive motor speed. Even the theoretical rate cannot be continually sustained because of the intermittent nature of the rail car dumping or storage reclaim.

Inclosed is Attachment A in which we have quantified the change in particulate material emissions. Please note that there will be an increase of 5.04 lbs/hr or 21.83 tons/yr based on a material loading operation of 5,500 hours annually.

CSX plans to retain the entire air flow capacity of the existing baghouse, as well as the duct system. We are committed to doing all that is necessary to not exceed the above emissions.

Please advise if additional information is required at this time.

Yours very truly,

F. C. Edmonds
Associate Engineer of Bridges

copies:
Mike
Bill } 6-12-87 WMH
Blair
Jim McDonald } 6/30/87 BBH
Victor San Agustin

ATTACHMENT A

EVALUATION OF CHANGE IN EMISSIONS

CSX ROCKPORT TERMINAL

DUST COLLECTOR 7 AND SHIP HOLD

TAMPA, FLORIDA

BASIS FOR CALCULATIONS

Use 1985 Operating Statistics:

(a)	Material Throughput	=	5,381,131 tons
(b)	Average Operating Schedule	=	2,445 hrs/yr
(c)	Average Loading Rate	=	2,200 tons/hr

Use August 8, 1984 Stack Test Data:

(d)	Volumetric Flow Rate (Std. Cdts.)	=	38,300 dscfm
(e)	Hourly Emission Rate	=	0.83 lbs/hr
(f)	Emission Concentration	=	0.0025 gr/dscf

Recent visible emission tests at stack and ship hold recorded at 0%. Baghouse Manufacturer's Warrantee of Efficiency is 99.90%. Therefore, a V.E. Recording of 0% is assumed to be equivalent to (g)99.90% Control. Manufacturer of proposed Chokefeeder guarantees visible emissions not to exceed 5%. Based on our experience in operating the Port, and on a permit requirement of a visible emission limitation equal to none (no opacity greater than 5%), the equivalent control of the proposed equipment operating at 5% opacity is no less than (h)99.75%.

Although the Plant is designed to operate at 3000 tons per hour, it is physically impossible to actually transfer material more than 5,500 hours annually. This restriction is imposed by inclement weather, maintenance on ship loader and movement of ship loader from vessel to vessel and from hold to hold in balancing each ship. Major modifications to the ship loader would be required to overcome this restriction. Transfer of material is, therefore, restricted to (i)5,500 hours per year or a maximum throughput of (j)11,000,000 tons annually. This limitation can be historically supported by records maintained at the Terminal.

Ratio of air flow to remain on ship loader to total design flow is:

$$(k)\frac{21{,}000 \text{ cfm}}{65{,}000 \text{ cfm}} \times 38{,}300 \text{ dscfm (d)} = 12{,}374 \text{ dscfm}$$

ATTACHMENT A (Cont'd)

EXISTING EMISSIONS

1. From Baghouse:

Hourly Particulate Matter (PM) Emission Rate = 0.83 lbs/hr(e)

$$\text{Yearly PM Emission Rate} = 0.83 \frac{\text{lbs}}{\text{hr}}\text{(e)} \times 2{,}445 \frac{\text{hrs}}{\text{yr}}\text{(b)} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 1.01 \text{ tons/yr}$$

2. From Ship Hold:

$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs}^*}{\text{ton}} \times \frac{5{,}381{,}131 \text{ tons}}{\text{in 1985}}\text{(a)} \times [1-0.999\text{(g)}] \times \frac{1}{2{,}000} = 5.4 \text{ tons/yr}$$

$$\text{Hourly PM Emission Rate} = \frac{5.4 \text{ tons}}{\text{year}} \times \frac{2{,}000 \text{ lbs}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{2{,}445 \text{ hrs}\text{(b)}} = 4.4 \text{ lbs/hr}$$

* Uncontrolled emission factor derived from Table 8.18-1, AP-42

Total Actual Hourly PM Emissions = 0.83 + 4.4 = 5.23 lbs/hr

Total Actual Yearly PM Emissions = 1.01 + 5.4 = 6.41 tons/yr

PROPOSED EMISSIONS

1. From Baghouse:

$$\text{Hourly PM Emission Rate} = 0.0025 \frac{\text{gr}\text{(f)}}{\text{dscf}} \times 12{,}374 \frac{\text{dscf}\text{(k)}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{1 \text{ lb}}{7000 \text{ gr}} = 0.27 \frac{\text{lbs}}{\text{hr}}$$

$$\text{Yearly PM Emission Rate} = 0.27 \frac{\text{lbs}}{\text{hr}} \times 5{,}500 \frac{\text{hrs}\text{(i)}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.74 \text{ tons/yr}$$

2. From Ship Hold:

$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs}^*}{\text{ton}} \times \frac{11{,}000{,}000 \text{ tons}\text{(j)}}{\text{Maximum}} \times [1-0.9975\text{(h)}] \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 27.5 \frac{\text{tons}}{\text{yr}}$$

$$\text{Hourly PM Emission Rate} = 27.5 \frac{\text{tons}}{\text{yr}} \times \frac{2000 \text{ lb}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{5500 \text{ hrs}\text{(i)}} = 10 \text{ lbs/hr}$$

Total Proposed Hourly PM Emissions = 0.27 + 10.0 = 10.27 lbs/hr

Total Proposed Yearly PM Emissions = 0.74 + 27.5 = 28.24 tons/yr

CHANGE IN PARTICULATE MATERIAL EMISSIONS

Change	=	Proposed Minus Existing
Hourly Rate	=	10.27 -5.23 = 5.04 lbs/hr
Yearly Rate	=	28.24 -6.41 = 21.83 tons/yr

ATTACHMENT A

EVALUATION OF CHANGE IN EMISSIONS

CSX ROCKPORT TERMINAL

DUST COLLECTOR 7 AND SHIP HOLD

TAMPA, FLORIDA

BASIS FOR CALCULATIONS

Use 1985 Operating Statistics:

(a) Material Throughput	=	5,381,131 tons
(b) Average Operating Schedule	=	2,445 hrs/yr
(c) Average Loading Rate	=	2,200 tons/hr

Use August 8, 1984 Stack Test Data:

(d) Volumetric Flow Rate (Std. Cdts.)	=	38,300 dscfm
(e) Hourly Emission Rate	=	0.83 lbs/hr
(f) Emission Concentration	=	0.0025 gr/dscf

Recent visible emission tests at stack and ship hold recorded at 0%. Baghouse Manufacturer's Warrantee of Efficiency is 99.90%. Therefore, a V.E. Recording of 0% is assumed to be equivalent to (g)99.90% Control. Manufacturer of proposed Chokefeeder guarantees visible emissions not to exceed 5%. Based on our experience in operating the Port, and on a permit requirement of a visible emission limitation equal to none (no opacity greater than 5%), the equivalent control of the proposed equipment operating at 5% opacity is no less than (h)99.75%.

Although the Plant is designed to operate at 3000 tons per hour, it is physically impossible to actually transfer material more than 5,500 hours annually. This restriction is imposed by inclement weather, maintenance on ship loader and movement of ship loader from vessel to vessel and from hold to hold in balancing each ship. Major modifications to the ship loader would be required to overcome this restriction. Transfer of material is, therefore, restricted to (i)5,500 hours per year or a maximum throughput of (j)11,000,000 tons annually. This limitation can be historically supported by records maintained at the Terminal.

Ratio of air flow to remain on ship loader to total design flow is:

$$(k)\frac{21{,}000 \text{ cfm}}{65{,}000 \text{ cfm}} \times 38{,}300 \text{ dscfm(d)} = 12{,}374 \text{ dscfm}$$

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1. From Baghouse:

Hourly Particulate Matter (PM) Emission Rate = 0.83 lbs/hr(e)

$$\text{Yearly PM Emission Rate} = 0.83 \frac{\text{lbs(e)}}{\text{hr}} \times 2{,}445 \frac{\text{hrs(b)}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 1.01 \text{ tons/yr}$$

2. From Ship Hold:

$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs*}}{\text{ton}} \times \frac{5{,}381{,}131 \text{ tons(a)}}{\text{in 1985}} \times [1-0.999\text{(g)}] \times \frac{1}{2{,}000} = 5.4 \text{ tons/yr}$$

$$\text{Hourly PM Emission Rate} = \frac{5.4 \text{ tons}}{\text{year}} \times \frac{2{,}000 \text{ lbs}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{2{,}445 \text{ hrs(b)}} = 4.4 \text{ lbs/hr}$$

* Uncontrolled emission factor derived from Table 8.18-1, AP-42

Total Actual Hourly PM Emissions = 0.83 + 4.4 = 5.23 lbs/hr

Total Actual Yearly PM Emissions = 1.01 + 5.4 = 6.41 tons/yr

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1. From Baghouse:

$$\text{Hourly PM Emission Rate} = 0.0025 \frac{\text{gr(f)}}{\text{dscf}} \times 12{,}374 \frac{\text{dscf(k)}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{1 \text{ lb}}{7000 \text{ gr}} = 0.27 \frac{\text{lbs}}{\text{hr}}$$

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$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs*}}{\text{ton}} \times \frac{11{,}000{,}000 \text{ tons(j)}}{\text{Maximum}} \times [1-0.9975_{\text{(h)}}] \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 27.5 \frac{\text{tons}}{\text{yr}}$$

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Change	=	Proposed Minus Existing
Hourly Rate	=	10.27 -5.23 = 5.04 lbs/hr
Yearly Rate	=	28.24 -6.41 = 21.83 tons/yr

ATTACHMENT A

EVALUATION OF CHANGE IN EMISSIONS

CSX ROCKPORT TERMINAL

DUST COLLECTOR 7 AND SHIP HOLD

TAMPA, FLORIDA

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$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs*}}{\text{ton}} \times \frac{5{,}381{,}131 \text{ tons(a)}}{\text{in 1985}} \times [1\text{-}0.999\text{(g)}] \times \frac{1}{2{,}000} = 5.4 \text{ tons/yr}$$

$$\text{Hourly PM Emission Rate} = \frac{5.4 \text{ tons}}{\text{year}} \times \frac{2{,}000 \text{ lbs}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{2{,}445 \text{ hrs(b)}} = 4.4 \text{ lbs/hr}$$

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$$\text{Yearly PM Emission Rate} = \frac{2 \text{ lbs*}}{\text{ton}} \times \frac{11{,}000{,}000 \text{ tons(j)}}{\text{Maximum}} \times [1\text{-}0.9975_{\text{(h)}}] \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 27.5 \frac{\text{tons}}{\text{yr}}$$

$$\text{Hourly PM Emission Rate} = 27.5 \frac{\text{tons}}{\text{yr}} \times \frac{2000 \text{ lb}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{5500 \text{ hrs(i)}} = 10 \text{ lbs/hr}$$

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Hourly Rate	=	10.27 -5.23 = 5.04 lbs/hr
Yearly Rate	=	28.24 -6.41 = 21.83 tons/yr

P 408 531 194

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to W. T. Whale	
Street and No. CSX Transportation 3701 Causeway Blvd.	
P.O., State and ZIP Code Tampa, FL 33619	
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 6/10/87 AC 29-129122	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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

3. **Article Addressed to:**
W. T. Whale
Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, Florida 33619

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P 408 531 194

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

5. Signature – Addressee
X Joe Crescenzi

6. Signature – Agent
X

7. Date of Delivery
6-23-87

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

DOMESTIC RETURN RECEIPT

File Copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 9, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, Florida 33619

Dear Mr. Whale:

On June 2, 1987, Messrs. Mike Harley of the Bureau of Air Quality Management and Frank Edmonds of CSX met to discuss your application for a permit (File No. AC 29-129122) to modify your present phosphate materials ship loading system. At this meeting Mr. Edmonds presented us with materials that provide a better understanding of the equipment that you propose to install and its capabilities. But this information does not respond to the requests in our letter of March 12, 1987. Your application for the subject permit remains incomplete pending a written response to our letter of March 12, 1987, pursuant to our discussions with Mr. Edmonds.

We appreciate the environmental commitment of your company and your cooperation. If you have any questions or wish to meet with us in Tallahassee, please write to me or call Mike Harley at (904)488-1344.

Sincerely,

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

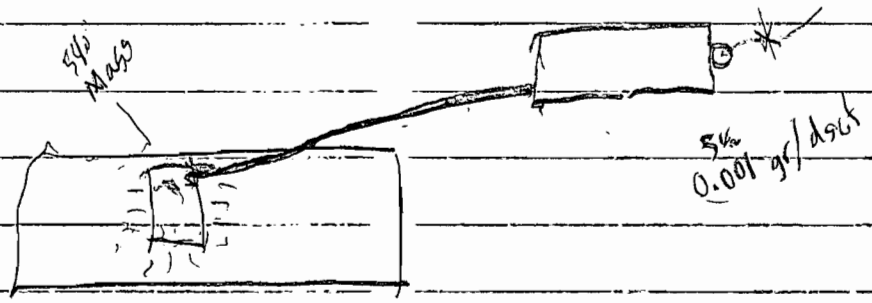
CHF/MH/s

cc: J. Campbell, P.E.
F. Edmonds, P.E.
W. Thomas, P.E.

CSX 06/02/87

O Frank Edmonds

Free fall 2.165/ton. Material falls in a controlled column.



11,000,000

CSX TRANSPORTATION
RAIL TRANSPORT GROUP

P.O. Box 45052
Jacksonville, FL 32232-5052

November 18, 1986
AZA 881.9 - FCE

DER
JUN 2 1987
BAQM

Mr. Jerry Campbell, P.E.
Chief, Air Engineering Section
Hillsborough County Environmental Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605

Dear Mr. Campbell:

CSX Transportation, Inc. (formerly Seaboard System Railroad), in its continuing efforts to improve operations and fugitive particulate control, plans to install a new vessel loading device at Rockport Terminal in Tampa, FL.

The device is manufactured by Midwest International and will consist of telescoping tubes, a discharge mechanism with pneumatically actuated flow control vanes, retractable flexible outer spout and a purging system to vent the inside area placing the loading device under a slight negative pressure.

The existing loading chute, dust collecting spout and tarpaulins will be removed. The duct on the loading gantry and the 65,000 ACFM collector will remain as is until the new installation has proven itself. Thereafter, the unused capacity of the collector will be diverted to the rear transfer point and other locations on the ship loader to improve emission collection.

The new equipment is scheduled to be installed and placed into operation in February, 1987. A shut-down period of approximately five days will be required for construction during which time loading operations will cease.

Preliminary drawings of the assembled unit and of an installation schematic are attached. Personnel fully familiar with this unit and its operation are available for further discussions. Please contact the undersigned at 904/359-1027 for conference arrangements, as necessary.

Yours very truly,

F. C. Edmonds
Associate Engineer of Bridges

bcc:
Mr. R. F. White, Director Bulk Terminals, CSX Transportation - 316
100 North Charles Street, Baltimore, MD 21201

Mr. W. T. Whale, Terminal Manager Rockport, Tampa, FL

FRANK-
(1) COPY INCLUDES PHOTOS OF EQUIPMENT SHIPPED.
USE AT YOUR DESCRETION.

Bruce,
These are the CSX materials I received today
Mike

I probably need file, original of book for review.

Midwest International
Standard Products Division

105 Stover Road
Charlevoix, Michigan 49720-0438
Phone: (616) 547-4073
Telex: 231166
Fax: (616) 547-9453

Manufacturers of
environmental equipment
for industry

a division of ron pair enterprises, inc.

May 14, 1987

DER

JUN 2 1987

BAQM

Mr. Frank Edmonds
CSX Transportation
P.O. Box 45052
Jacksonville, FL 32232-5052

Re: Rockport Terminal Shiploader

Dear Frank:

The enclosed letter to your terminal manager, Mr. W. T. Whale, outlines our preliminary performance warranty which includes the air quality control guarantee to meet the number 10 opacity rating as required by the Florida EPA.

Most recent EPA tests conducted at IMC in Port Sutton have indicated a number 5 opacity at the spout discharge, according to Mr. Don Erickson of IMC.

In some areas, a number 10 rating was indicated, however, it is our understanding that this occurred at the old tube joints and up near the IMC pivot gimbal where the product dumps into the spout.

Based upon your Chokefeeder having a flexible outer shroud covering the rolling telescoping tubes and the latest design techniques built into the Chokefeeder and its controls and including the integral clean air fan creating a negative pressure within the spout, we feel confident that you can easily meet a number 5 opacity test throughout the length of the spout.

We can then, in fact, guarantee that the new MIDWEST Chokefeeder will meet this number 5 opacity requirement.

If you have any questions, please contact me.

Sincerely,

Ron Pair
President
MIDWEST International

Enclosure: Letter of October 20, 1986 to Mr. W. T. Whale (Reference)

RP/mwp

Midwest International
Standard Products Division

105 Stover Road
Charlevoix, Michigan 49720-0438
Phone: (616) 547-4073
Telex: 231166

Manufacturers of
environmental equipment
for industry

a division of ron pair enterprises, inc.

October 20, 1986

Mr. W. T. Whale, Manager
CSX Transportation
Rockport Bulk Terminal
3701 Causeway Blvd.
Tampa, FL 33619

Re: MIDWEST Chokefeeder

Dear Mr. Whale:

As requested, we are presenting our position with respect to the issues and questions that came up during our meeting.

A. The standard MIDWEST equipment warranty will apply, copy enclosed (Form No. 0013). This warranty is limited to the conditions as outlined in the Terms and Conditions of Sale. The only exception is the drive train which is guaranteed for (5) years. The drive train includes the motor, brake, gear box, couplings, shafts, bearings, cable transfer sheaves, sheave brackets and the (2) groove drive pulleys. The lifting cables are warranted for the normal one year period.

B. The performance warranty is based on EPA acceptance of a number 10 opacity rating. MIDWEST guarantees EPA acceptance of your operation from a dust control standpoint at the bottom of the spout loading 68 and 72% dry rock providing the equipment is operated according to our operating procedures and is not abused. We cannot guarantee dust control within your conveyor or its discharge chute or gimbal, however, we will work with you to assist in the best use of your existing negative pressure to properly vent this area.

C. Regarding abrasion and the effect your products will have on the MIDWEST equipment, we feel that what we have learned by shipping phosphate rock loadout equipment to the Big Four Mine in 1976, W. R. Grace and IMC in the time period up to 1982 and specifically the Chokefeeder installed at IMC Port Sutton in January 1985 has allowed us to become familiar with your products. Several revisions to our product line, especially the internal components, actuators and controls in the IMC Chokefeeder, have resulted in a much improved loader which we have designed to provide low maintenance service for a (5) year period without major repairs.

The flexible outer spout, filter, purging valves, product level sensors, Chokefeeder pneumatic cylinders and some control components will obviously wear or become inoperative at some point and will require replacement. Prior to shipment, MIDWEST will provide a printed recommended spare parts list.

D. The MIDWEST rolling telescoping tube design has been used for 10 years in highly abrasive environments, including alumina, fertilizers and petroleum coke, as well as PVC resins and soda ash. Just recently, however, we have been recommending the tubes to be installed in a vertical position for your type of application as opposed to diagonal loading for which the rolling tubes were originally designed. Retracting and extending vertically is less sensitive to wear and sticking than a diagonal application would be. Based on the recent installation of rolling tubes at IMC Texas City, we may use a nylon roller with a stainless steel inner race in place of the high tempered 2.5" diameter hardened and sealed cam roller which is now being used. You have our roller sample and roller casting. The attached drawings show some of the tube designs we have constructed. The rollers have but one purpose which is to keep the tubes centered, one within the other. This prevents the tubes from sticking.

E. Loadout capacity will vary depending upon the product being loaded and the size of the MIDWEST loader. We have selected the MH 72-OS Series loader with a 36" square product inlet. This 36" product inlet becomes a 30" diameter tube inside the venturi which is actually the first tube, however, it becomes stationary. The Chokefeeder flow area is 32" diameter with all vanes open or 800 sq. in. We rate this at 4200 STPH of 60PCF granular product. Based on the design information we have, this appears to have a significant safety factor.

F. Semco Contracting Inc. will control the period of time necessary to erect the mechanical equipment, install the new control panel and make the necessary electrical hook up and field modifications. They have based their time frame on an (8) hour day downtime, I believe. However, it would be desirable to work directly with Semco as they have indicated they will cooperate in any way to accelerate the retrofit and reduce your downtime.

G. Although we have not loaded wet rock through a MIDWEST Chokefeeder, we feel it should not present a problem as the moisture content is usually less than 12%. Our recommendation is to use the Chokefeeder for dry or wet rock as the equipment is better being used than stored, reinstalled and reused on a frequent basis. Cleaning the system and the Chokefeeder after each loading is a part of the preventive maintenance program. Our recommendation for cleaning the Chokefeeder module would be to boom back to the dock, lower the Chokefeeder module down to the dock, release the electric, pneumatic and mechanical disconnects and use an air lance to blow out the interior of the unit. The unit should then be lubricated. Prior to this, it is recommended that the forced hot air reverse air filter heating system be energized for 30 minutes to dry out and purge the filter tubes from the clean air side out. This should also be done again prior to loading the next vessel. After cleaning and lubricating, the Chokefeeder should be re-attached to the lower rim of the spout and the utilities reconnected.

H. MIDWEST has no problem with applying electrical or electronic components that are compatible with your existing equipment. Please note your preference on the electrical approval drawings if we have not already confirmed same with Jim Hurley.

I. Upon receipt of the actual useful travel required from your end, MIDWEST will extablish an accurate total net static weight, operating weight and plugged weight. It is our recommendation that you verify the capacity of your existing boom to accept this weight. Your existing drive winch, cable assemblies and telescoping chute will be removed and no longer used.

J. We feel the filter module as designed will provide a negative pressure within the spout enclosure to properly vent any displaced air and dust inside the spout due to surges caused by Chokefeeder modulation.

H. 460 VAC power will be required to operate (1) 20HP drive motor, (1) 5HP filter fan motor and (1) 1HP filter heater fan. The control transformer and motor starters are a part of the Semco electrical package. MIDWEST provides a (4) conductor NEMA 4 cord reel and a pneumatic reel to service the Chokefeeder. A pneumatic and electric disconnect will be provided by MIDWEST at the Chokefeeder breakaway flange. Estimated time to remove or re-attach the Chokefeeder module is less than one hour.

I. It is estimated that (1) hour of total preventive maintenance will be required after each loading.

J. Unless otherwise advised, MIDWEST will clean, prime and epoxy paint the complete unit with Dunes Tan. The flexible outer spout fabric will be black neoprene impregnated cross-stitched nylon, 24 oz. per yard. The flexible outer spout rings are 6061-T6 alloy extruded specifically by MIDWEST for this type of installation.

MIDWEST wishes to thank you and CSX for considering MIDWEST equipment for your Rockport terminal. We look forward to the project and if you, Jim Hurley or Mr. Edmonds have any questions, please contact us.

Sincerely,

Ron Pair
President
MIDWEST International

Enclosures: Esso Drawing
Tube Drawing
Hall-Buck Marine Drawing
Modular Drawing No. 1301

xc: F. Edmonds, CSX Transportation
D. Heckman, MIDWEST-Material Loading Equipment
E. Knight, MIDWEST International
J. McCready, Mgr-R&D, MIDWEST International
M. Schaberg, P.E., Proj. Mgr, MIDWEST International

RP/mwp

CSX
ROCKPORT
BULK LOADOUT
TERMINAL
MIDWEST CHOKEFEEDER™
INSTALLATION

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IBJ FRONT COVER

MIDWEST PLANT PHOTOGRAPH

MIDWEST CHOKEFEEDER™ FOR THE DUST FREE LOADING AND STOCKPILING OF DRY BULK MATERIAL

Author
Ron Pair
MIDWEST International
Division Ron Pair Enterprises, Inc.

INTRODUCTION

Recent MIDWEST design technology has resulted in a unique minimum velocity volumetric loader which controls or eliminates dust.

Energy efficient truck or vessel loading as well as stockpiling of a variety of dry dusty materials, including cement, fertilizer, grain, chemicals, coal, soda ash, phosphate rock and limestone can now be accomplished dust free up to 6000 TPH using the MIDWEST Chokefeeder™.

Complete elimination of dust piping and high energy dust collection result in no aspiration or minimal modular aspiration confined only to the internal portion of the spout. This reduces or completely eliminates fugitive particulate emissions as an environmental hazard and conserves energy by up to 95%.

This MIDWEST modular concept allows the design engineer to select from a variety of modules, those components necessary to satisfy a specific application.

Due to local and federal air quality regulations, many dry product handling facilities are faced with possible shut down due to current bulk handling techniques.

Out-moded bulk filling, stacking and loading equipment normally has no means or design criteria for successful dust control. This universal problem is now a major subject of interest to all industries.

Because of stringent environmental regulations and enforcement of these regulations, as well as the desire of specific industries to improve the working environment, these problems have recently been directly addressed by industry and major environmental equipment suppliers. The addition of dust control equipment to an existing facility often requires a complete redesign of the filling, loading or stockpiling installation.

The installation of a conventional retractable loading spout to contain the product being loaded offers some degree of dust control. Aspiration, often an expensive and high maintenance item, can however, usually be applied and ultimately connected to the loading or filling spout to place the spout under a negative pressure or vacuum usually assuring successful dust control.

This conventional approach generally requires the dust collector or other air withdrawal device to be located apart from the loading or filling spout. The two are usually connected by complex dust piping. Although sized for maximum efficiency, dust piping is often a high maintenance item that is frequently neglected, causing the complete dust control system to fail.

Location of the separate dust collector or filter is also usually a problem and the cost of a support structure and erection costs are a consideration as well as the problem of disposing of the collected dust.

MIDWEST technology has resulted in an integral dust filter and retractable bulk loading spout — the Vaculoader — which is patented in the U.S., Canada and Japan, as well as other countries.

The Vaculoader is one more tried and proven method of truck, railcar, barge or ship loading and is ideal for tripper installations providing precision stockpiling without dust and without complex dustpiping.

Recent MIDWEST technical developments have also resulted in the MIDWEST Chokefeeder™ which requires little or no aspiration depending upon the aerated nature of the product.

Designed primarily for vessel loading, the MIDWEST Chokefeeder volumetrically releases the product onto the top of the pile at a velocity low enough to not generate dust. The Chokefeeder can also be used for open truck loading and stockpiling.

The Chokefeeder discharge mechanism consists of a series of vanes actuated pneumatically, electrically or hydraulically. Instrumentation is designed into the unit to allow the vanes to operate in two or three modes, depending upon the application with product being released upon command from an integral programmable controller sorting signals from sensors built into the Chokefeeder.

With all vanes closed, the lower scavenger begins to fill with product. As the level increases, mode number (1) releases up to 70 percent of the product. Additional modes continue to feed product onto the pile, yet still maintaining a level of product inside the Chokefeeder.

In keeping with the MIDWEST modular design, the Chokefeeder, as a non-retractable loader, can be retrofitted on the bottom of existing telescoping tubes. The non-retractable Chokefeeder can also be installed at the discharge end of a lufting stockpiling conveyor releasing product gently on the pile.

Using MIDWEST automatic raising controls, the Chokefeeder will maintain a reasonably short distance between the pile and the release vanes and follow the pile up to the desired level.

Advancing further into the MIDWEST modular product line, a complete retractable flexible

outer spout could be used with or without inner columnar control, depending on the product and the vertical travel required.

This portion of the system includes a complete precision machined cast steel retracting mechanism enclosed for weather protection, yet easily serviceable for maintenance purposes. The flexible outer spout constructed of layered heavy flexible impregnated fabric and corrosion resistant non shear alloy rings provide an enclosure for the column of product as well as any positive pressure that may be generated by the Chokefeeder. The flexible outer spout also protects the descending column of product from wind and other weather conditions. In effect, the entire system becomes totally enclosed.

The conventional MIDWEST venturi and scavenger can be used with the venturi forming the product into a controlled column. Several venturis are available. The basic Class I unit would be used for fine or powdered products, including soda ash, cement, alumina or grain.

Should the product be granular or lumpy, the venturi could include a rock box which collects product in an annular area inside the venturi taper and provides an ideal high impact target area for the trajectory of product flowing from the belt conveyor or feed chute which contacts only its own bed of product. The result is no wear regardless of the high abrasive nature of the product. Self cleaning rock boxes are also available when handling a variety of products, eliminating contamination.

Manually and electrically adjustable venturis are available for installations where inner cones or telescoping tubes are not desirable and where vertical travels are short enough so that the product will not contact the inner portion of the flexible outer spout.

For longer travels up to 100 feet or 30 meters, MIDWEST recommends for column control either precision telescoping tubes with hardened sealed rollers 120 degrees apart at the upper end of each tube or high density polymer cones with a variety of liners or inserts. The cones are usually used to reduce weight and for some products, no liners are required.

Where highly abrasive lumps are being handled, MIDWEST precision telescoping tubes are recommended, as each tube becomes larger in diameter with little surface area in contact with the descending column of abrasive product.

Because of the completely sealed unit the area between the tubes, as they roll inside of each other, becomes less of a factor and any dust emitted is contained within the flexible outer spout and ultimately falls down into the Chokefeeder and onto the pile.

The MIDWEST modular design again requires consideration if the nature of the product is aerated through intentional aeration introduced into the product to encourage flow or through natural aeration of a fine product such as alumina or soda ash. This type of aeration usually occurs when the product enters the conveyor discharge or feed chute uncontrolled. Natural aeration can be reduced by using a more scientific design within the conveyor discharge chute. Dimensionally and geometrically, any feed or discharge chute should be designed to discourage natural aeration and wear caused by product impact. MIDWEST can assist design engineers in the proper design of chutes resulting in a smooth flow of product into the MIDWEST venturi. The venturi is also designed to partially de-aerate the product as it "squeezes" the product into a column.

The MIDWEST filter module, complete with filter tubes and cages with air purging venturis, tube sheet, filter purging system and centrifugal blower can easily become a part of the Chokefeeder system to "vent" the inside area placing the Chokefeeder under a slight negative pressure.

The filter module is normally used only when loading products of a fine aerated nature and air withdrawal capacities are intentionally controlled in the 200/800 CFM range.

Each of the above modules, the base retractable spout, the telescoping tubes or cones to contain the column and the Chokefeeder can be easily clamped together as desired to satisfy any application.

Venturi construction and the decision to use telescoping tubes or columnar control cones are generally made by MIDWEST based on a study of each application and the product or products being loaded.

Other options include prewired junction boxes with strip heaters, filter module forced reverse air heating systems when handling hygroscopic products, central lubrication systems, pivot gimbal assemblies to allow the MIDWEST Chokefeeder to remain plumb as the feed chute or conveyor boom is lufted up and down even to a vertical storage position.

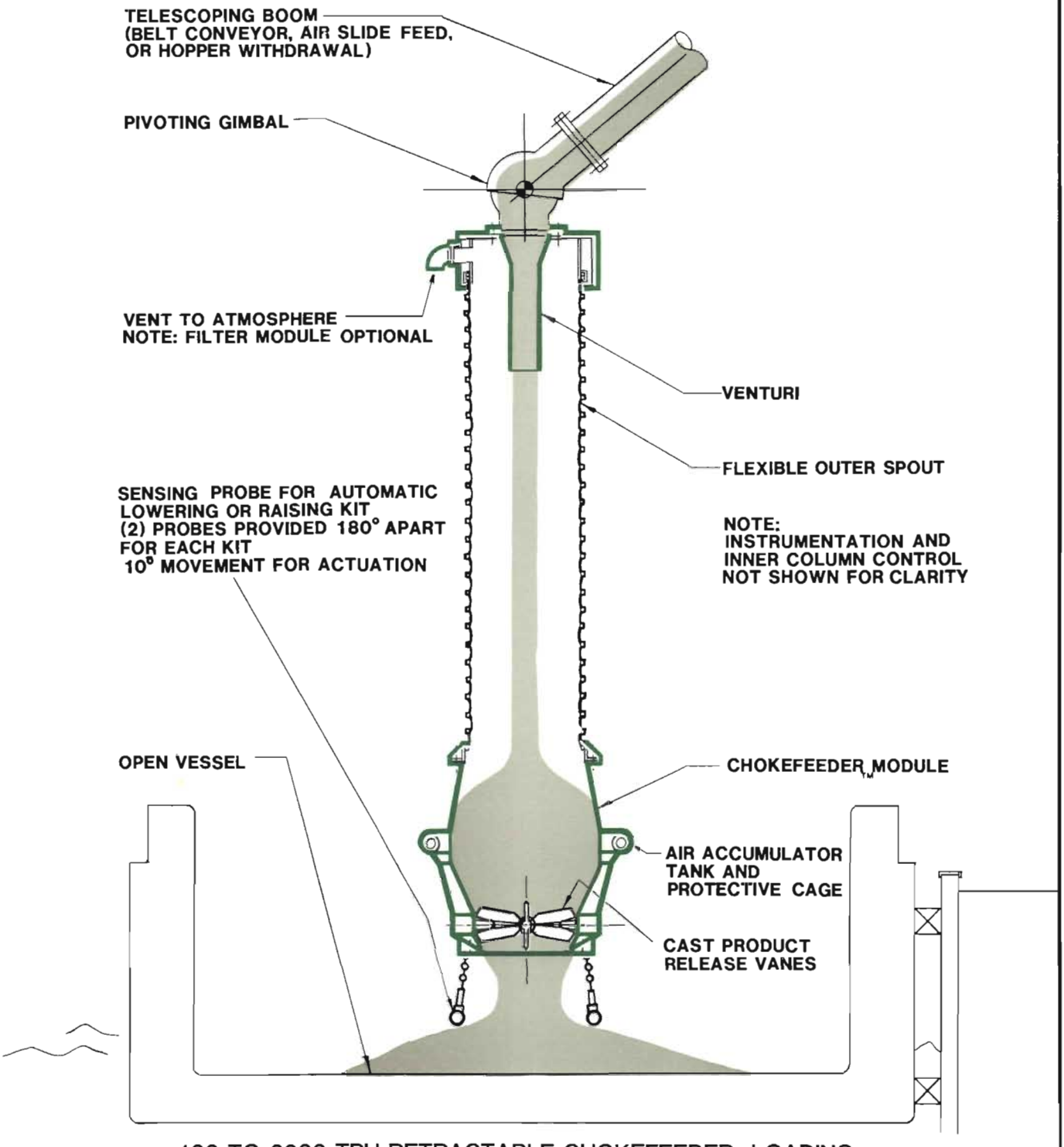
Modular additions also include product relief doors to avoid plugging the spout allowing more desirable design loads to be computed when engineering a new system or a retrofit.

Powered rotary deflector spoons can also be easily and quickly attached to the MIDWEST Chokefeeder and operate with all vanes open to attain a descending velocity to deflect the product out the desired distance. Dust generated by trimming usually is a concern, however, the filter module will contain a significant percentage of this dust.

The Chokefeeder is a unique loading device with the economic potential to satisfy a tight budget as well as the Environmental Protection Agency. By the standards of many agencies, the MIDWEST Chokefeeder is considered the best available technology.

Midwest International
Div. Ron Pair Enterprises, Inc.
Midwest Plaza
105 Stover Rd.
Charlevoix, MI 49720-0438
Tel: (616) 547-4073
Telex: 23-1166

Form No. 0245



100 TO 6000 TPH RETRACTABLE CHOKEFEEDER™ LOADING
FOR OPEN VESSELS

Midwest International
Environmental Equipment
for Industry

Operational Headquarters
Midwest Plaza, 105 Stover Rd.
Charlevoix, Michigan 49720
Phone (616) 547-4073
Telex 23-1119
a division of
ron-par enterprises, inc.

REF.
SERIAL NO.
JOB NO.
SHEET NO.
DRAWING NO.

PREPARED FOR:
P.O. NO. DATE:

RETRACTABLE CHOKEFEEDER™
TITLE: OPEN VESSEL LOADING
SCALE: NONE DRAWN: JMH DATE: 9-85 CHECKED:

REVISION DATE NO.

CSX - TRANSPORTATION
ROCKPORT TERMINAL

BULK LOADOUT SYSTEM
CHOKEFEEDER™

MIDWEST INTERNATIONAL

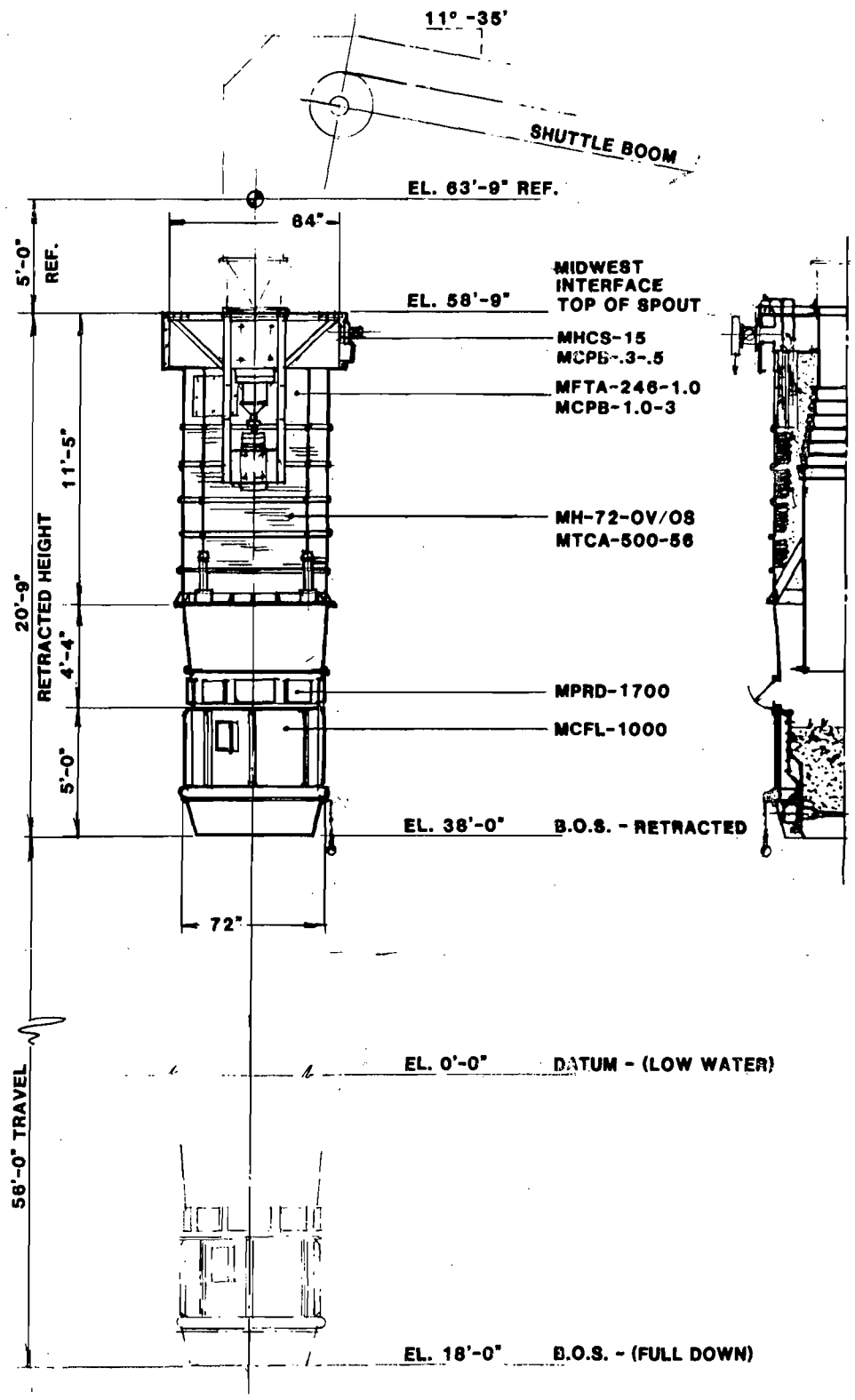
M. SCHABERG, P.E. PROJECT MANAGER
J. McREADY, SENIOR DESIGN COORDINATOR
G. GROSSKOPF, CONTROLS ENGINEER
C. ADAMS, MANUFACTURING AND TRAFFIC MANAGER

DRAWINGS:

GENERAL ARRANGEMENT	DRAWING NO.	1341-2282
TELESCOPING TUBE	DRAWING NO.	1313-2282
CHOKEFEEDER	DRAWING NO.	680-2282
EXPLODED VIEW	DRAWING NO.	1340-E

ELECTRICAL DRAWINGS:

SCHEMATIC DRAWING NO. ESP 5204-2282, 1&2
CURRENT MONITOR PANEL DRAWING NO. EAP 0001S-2282



Midwest International
Environmental Equipment for Industry

Operational Headquarters
Midwest Plaza, 105 Stover Rd.
Charlevoix, Michigan 49720
Phone (616) 547-4073

REF. ROCKPORT
SERIAL NO. MH-2282
JOB NO. 14410
SHEET NO 1-9
DRAWING NO. 1332-2282

PREPARED FOR: CSX-TRANSPORTATION
P.O. NO. DATE: 1/9/87
TITLE:
SCALE: DRAWN: G.A. DATE: 1/9/87 CHECKED: J.M.

REVISION	DATE:	NO.

Midwest International

TECHNICAL SPECIFICATIONS

MIDWEST
RETRACTABLE BULK LOADING AND STOCKPILING SPOUTS,

FLEXIBLE OUTER SPOUT SERIES
BASE UNITS WITH OPTIONS, ACCESSORIES AND MODULES

DESIGN CRITERIA: The MIDWEST equipment described in this technical specification is designed to be applied as base units capable of accepting a variety of optional modules and accessories allowing the application engineer to design a retractable bulk loader or stockpiling spout tailored to a specific application using standard pre-engineered components. The completed assembly can load or stockpile dry dusty products at high capacities and reduce or eliminate dust in compliance with most EPA regulations and is considered by most agencies to be the best available technology in terms of dust control.

DESCRIPTION: The MIDWEST modular vessel loader and/or stockpiling spouts are designed to be installed at the discharge end of a ship or barge loading conveying boom, air gravity conveyor or diagonal vessel loading chute. Raw material stockpiling applications usually require the MIDWEST equipment to be installed on the discharge chute of a radial or fixed conveyor stacker or tripper conveyor. Product passes through the spout inlet and down through the internal retractable section of the spout which can be rolling telescoping tubes or retractable cones. A reversing electric motor drive and lifting mechanism retracts or extends the spout discharge maintaining a consistent dimension above the pile. Using the flanged dust outlet, the spout can be vented back to a dust collector or a dust filtration module and a vent fan can be added to the base unit. A MIDWEST Chokefeeder module or slitted flexible skirt can also be added to the spout discharge depending upon the type of product being handled and the degree of dust control desired. For vessel trimming, a rotating powered spoon is available. All options, accessories and modules listed in this technical specification can be added to the base unit to suit specific applications. MIDWEST equipment and options described are trademarks registered and may be patented in the U.S. and other countries.

Base Model	MD30	400 TPH*	Maximum Travel	20'	6M
Base Model	ME36	750 TPH	Maximum Travel	32'	10M
Base Model	MF42	1500 TPH	Maximum Travel	40'	12M
Base Model	MG50	2400 TPH	Maximum Travel	60'	18M
Base Model	MH72	4200 TPH	Maximum Travel	80'	24M
Base Model	MI96	6000 TPH	Maximum Travel	100'	30M

* Capacities are based on 60 PCF fines with flooded product inlet.

GENERAL SPECIFICATIONS

Main Frame: ASTM-A-36 carbon steel, all welded box construction with access door over all drive end components.

Product Inlet: Flanged to allow unit to be bolted to a MIDWEST sliding knife gate, withdrawal valve, screw, belt or drag conveyor discharge, airslide discharge box or fabricated transition.

Dust Outlet: Flanged dust outlet(s) standard on all base units. Designed to allow installation of integral modular filter clean air fan, AR dirty air fan, or can be connected to a remote dust collector.

Retractable Spout Drive: Electric motor retraction drive with 460 VAC, 3 PH, 60 Hz 1.0 service factor TEFC motor and reducer mounted under main pan for weather protection. Note: Optional motor positions available. Rotating NEMA 4 up/down DPDT limit switch (2) position. Note: This switch must be field adjusted for full up/down travel to protect the gear reducer from damage. Cable lifting pulleys precision machined cast ductile, keyed to shaft with couplings. Three (3) or four (4) point cable pick up to stabilize spout in high winds. Drive lifting cable 7 x 19 galvanized wire rope connected to adjustable sash weights inside lifting tubes for final leveling of spout. Drive access door on top of retractable spout main frame to provide installation and maintenance access to all drive components. Cable transfer sheaves cast steel, bronze bushed, with lubrication fittings and keepers to prevent lifting cable snarling. Note: Refer to MIDWEST Terms and Conditions of Sale, Form No. 0013, for product warranty.

Product Venturi: Standard venturi sized to load maximum product capacity specified. Specify materials of construction, Class I, II, III or V. When fully flooded with product, the venturi will form the product into a controlled column decreasing vertical product velocity and reducing dust caused by column acceleration. Refer to inner cone and rolling tube options and to optional adjustable venturi.

Vertical Useful Travel: Travels available to 100'. Refer to Drawing No. 1301.

Flexible Outer Spout: Standard cross stitched vinyl or neoprene coated polyester or nylon fabric double lock stitched with 6061-T6 extruded aluminum outer rings and half round 6061-T6 extruded aluminum inner rings compressing fabric into concave area on back side of outer ring. Aluminum extrusions have rounded edges to avoid shearing of fabric and are riveted to inside ring with fabric compressed between rings. Top and bottom rings secured to top of spout and lifting ring with zinc plated lock bolts. Note: Other materials available.

Lifting Ring: Cast ductile precision machined one piece lifting ring with mounting holes for lower scavenger taper, all models through MF42 Series. Larger base units are heavy duty weldments.

OPTIONS:

Pivot Gimbal: Structural product gimbal to allow lufting conveying boom to raise and lower while maintaining a plumb or vertical spout attitude. Available in Class I, II, III and V construction.

Adjustable Venturi: Manual or electric, specify; Class I, II , III and V available.

Standard Venturi with Rock Box: Specify self cleaning for a variety of products and/or replaceable wear spool. Class II, III and IV available.

Retracting Cones: For product column control. Specify full travel or partial travel. Class I, II, III, IV and V available.

Rolling Telescoping Tubes: For product column control. Full travel. Class I, II, III, IV and V available. Refer to drawing for method of suspension and details. Specify size desired, i.e., MTCA 250,400, 500,1000 or 1500 Series.

Vacupac Filter Module: With fan, tube sheet, filter tubes and filter air purging system. Refer to unit drawing for details. Filter modules available, MTFA 60, 100, 125, 190, 280 or 350 Series. Other filter capacities available. Fan capacities available, MCPB .5, .75, 1.0, 1.5, 2.0 and 2.5

Vacupac Filter Reverse Clean Air Heating System: For hygroscopic products or high humidity environment. Includes butterfly valve to isolate clean air fan, filter heater fan, plenum and controls. Refer to unit drawing for details.

Vacupac Filter Strip Heaters: For high humidity environment. Installed inside filter housing.

Fan Assembly: Dirty air booster fan, Class II, III or IV, can be connected to spout flanged dust outlet to place spout under negative pressure. Refer to fan drawing for models available.

Telescoping/Pivoting Vent Duct: Sized according to air withdrawal or negative pressure placed on conveyor discharge chute. Desirable only on lufting chute or conveyor boom installations. Duct is of all rigid construction, eliminating need for flexible dust withdrawal hose. Used with or without Chokefeeder, consult factory. Available in Class I and III construction.

Product Relief Door Module: Attaches to lower spout lifting ring. Includes counterweighted normally closed product relief doors designed to open if plugged condition occurs. Available with or without limit switches to shut down product feed.

Chokefeeder Module: For volumetric low velocity release of product on pile. Designed primarily for open stockpiling or vessel loading, the Chokefeeder module reduces or eliminates dust. Pneumatic actuators modulate open and closed as level sensors inside Chokefeeder tub measure product level and maintain head of product. Programmable logic controls (PLC) reduce wiring and provide a variety of optional programs to suit loading of up to 24 different products. Note: Recommended for fine granular or lumpy highly abrasive products. Class II standard. Class III and V available. Module is quickly detachable including utilities and includes support stand. Aspiration not usually required. Specify model number desired, MCFL 150, 250, 400, 500, 1000 or 1500.

Flexible Slitted Skirt: For use on open stackers, open vehicle loading and open vessel loaders. Attaches to bottom lifting ring. Available in neoprene or gum rubber double layer. Conforms to pile reducing dust emissions. Refer to drawing for lengths.

Scavenger Tapered Discharge (EV): For enclosed vessel or vehicle loading. Allows spout to locate center of round hatches.

Scavenger Discharge (OV/OS): For open stockpiling or open vessel or vehicle loading.

Trimming Spoon, Rotating Power Operated: Attaches to lower scavenger lifting ring. Includes quick utility disconnects, electric motor 360 deg. rotation with pneumatic or electric actuated trajectory control (specify). Class I, II, III, IV and V available.

Rotating Product Trimmer: MD30, ME36 only. Designed for enclosed truck or railcar loading to obtain full vehicle. Air motor operated with speed and pressure regulation to provide desirable product trajectory. Available in Class III construction only, complete with automatic pressure differential switch to shut down product feed when impeller stalls.

Prewiring, Sub Assemblies and/or Modules: All prewired to NEMA 4X junction boxes with numbered terminal strips to facilitate assembly and installation. Includes all accessories or options ordered with equipment. Excludes electric motors. Automatic raising, level sensing enclosures are shipped loose for field installation unless specific location on spout is indicated on certified drawings.

Complete Mechanical Assembly: If common carrier or railcar dimensions permit, MIDWEST can completely assemble the equipment to facilitate installation. Final adjustments to rotating up/down limit switch and other options and accessories must be field adjusted. Refer to Installation Manual for specific unit.

Prewiring, Complete Assembly: Optional if unit can be shipped completely assembled. Includes all options and accessories ordered with equipment. Motor wiring excluded and automatic raising, lowering or level sensing enclosures which are shipped loose for field installation unless specific location on spout is indicated on certified drawings.

OPTIONAL ACCESSORIES:

Automatic Raising Kit: For (OV/OS) open vehicle or vessel loading or open stockpiling only. Tilt switch probe attached to cast lifting ring raises spout when tilted by product or by slitted skirt flaring out as the skirt conforms to the pile of product. Controller with NEMA 4X enclosure is shipped loose and includes green "Normal" and red "Raising" indicator lights. Static time delay included to allow spout discharge to raise as product pile increases in height avoiding plugging of spout.

Automatic Lowering Kit: Designed to be used with automatic raising kit in open stockpiling or vessel loading applications. Automatic lowering sensing probe(s) will allow spout to automatically extend down into a rat hole or valley to maintain a close relationship between spout and pile. Controller NEMA 4X shipped loose.

Level Sensing Kit, Type A: For (EV) enclosed vehicle or vessel loading only. Tilt switch probe NEMA 4 attached to lower scavenger discharge to detect full vehicle or vessel and to send signal to controller which is shipped loose for field mounting. Enclosure includes NEMA 4X construction with green "Normal" and red "Full" indicator lights. Static time delay included to delay signal allowing field adjustment of product level.

Combination Automatic Raising-Level Sensing Kit: For (EV/OV) enclosed or open vehicle or vessel loading. Controller consists of NEMA 4X enclosure with red and green indicator lights and (2) position selector switch to allow operator to select either "enclosed vehicle or vessel loading" or "open vehicle or vessel loading." Selector switch directs probe signal to either indicate a full vehicle when loading enclosed vehicles or will raise spout discharge above product pile to avoid plugging of spout. Controller shipped loose for field mounting.

Level Sensing Kit, Type B: For (EV/OV) applications. Indicates a plugged condition within the spout. The pressure differential switch is designed to be set within an acceptable operating range and to sense the static pressure variation inside the flexible outer spout area. When activated, the signal can be used to shut down the product feed, sound an alarm or raise the spout.

Level Sensing Kit, Type C and C1: For (EV) enclosed vehicle or vessel loading only. Same as Type A except NEMA 4 capacitance proximity probe or Type C1 used as a plug switch installed in lower product control tube between inner and outer scavenger or in product relief door module. Refer to drawing for details.

Air Vibrator Kit: For (EV) enclosed vehicle or vessel loaders only. Two (2) ball type air vibrators located on lower cast lifting ring to vibrate loose product from inside of spout after loading. Air manifold and festooning of air line up to top of main pan and connected to 115 VAC NEMA 4 solenoid valves with ½" NPT female ports. Air supply to be field connected to valve by others.

Intermediate Position Limit Switch Contacts: For open stockpiling only. Allows setting between full up and full down of rotating up/down limit switch. Designed to determine when maximum pile height is reached, stopping product feed and raising spout to full up position. Applicable for fixed, radial and tripper stockpiling.

Slack Cable Limit Switch Kit: Automatically stops spout drive when spout discharge contacts enclosed vehicle hatch, open vehicle obstruction or open vessel hatch coaming preventing continued motorized extension. This signal also can automatically start continuous timed purging cycle if filter module is used. Two (2) NEMA 4/12 lever limit switches with special lever rollers respond to a slack lifting cable condition. NEMA 9 enclosures available.

Product Relief Door Plug Limit Switch Kit: Designed to send signal to spout feed when product relief doors open signaling a plugged condition. Specify enclosures. NEMA 4 (standard) and NEMA 9 (available).

Pneumatic Hose Reel: Spring tensioned pneumatic reel to provide air supply from top main spout frame to lower retractable spout discharge, providing air to Chokefeeder module, trimmer or other pneumatic actuated options.

Electric Cord Reel: Spring tensioned electric reel to provide electric power to lower retractable spout discharges in place of standard festooned flat ribbon cable. Specify enclosure, NEMA 4 (standard) or NEMA 9 (available).

Digital Travel Readout: Electronic vertical spout travel readout calibrated in feet or meters allowing operator to monitor vertical position of spout lower discharge or translated into pile height. Designed to provide operator pile height during open stockpiling.

Field supervision of erection and/or start up by MIDWEST is $425.00 per diem, plus expenses and travel at cost.

Two (2) installation, Operating and Maintenance Manuals provided, one shipped with equipment and one sent to Purchasing Department at time of shipment. Additional copies at $40.00 each.

MATERIALS OF CONSTRUCTION: Specify

Class I:	Moderately Abrasive Fines
Class II:	Abrasive Granules, 250 BHN
Class III:	Stainless Steel Product Area
Class IV:	High Temperature, 175/1000 Degrees F
Class V:	High Impact, 450 BHN

MOTOR AND ELECTRICAL ENCLOSURES: Specify

Motors:	TEFC (Standard), Totally Enclosed, Fan Cooled XP (Available), Explosion Proof IEC (Available), International Electrical Code
Enclosures:	NEMA 12 (Standard), Gasketed, Dust Tight NEMA 4, Dust and Water Tight (Standard and/or Available) NEMA 4X (Standard), Junction Boxes Only, Chemical Duty, Dust and Water Tight NEMA 9 (Available), Explosion Proof
Note:	Option - To be specified with purchase of new equipment. Optional Accessory - Can be purchased as a kit and field installed.

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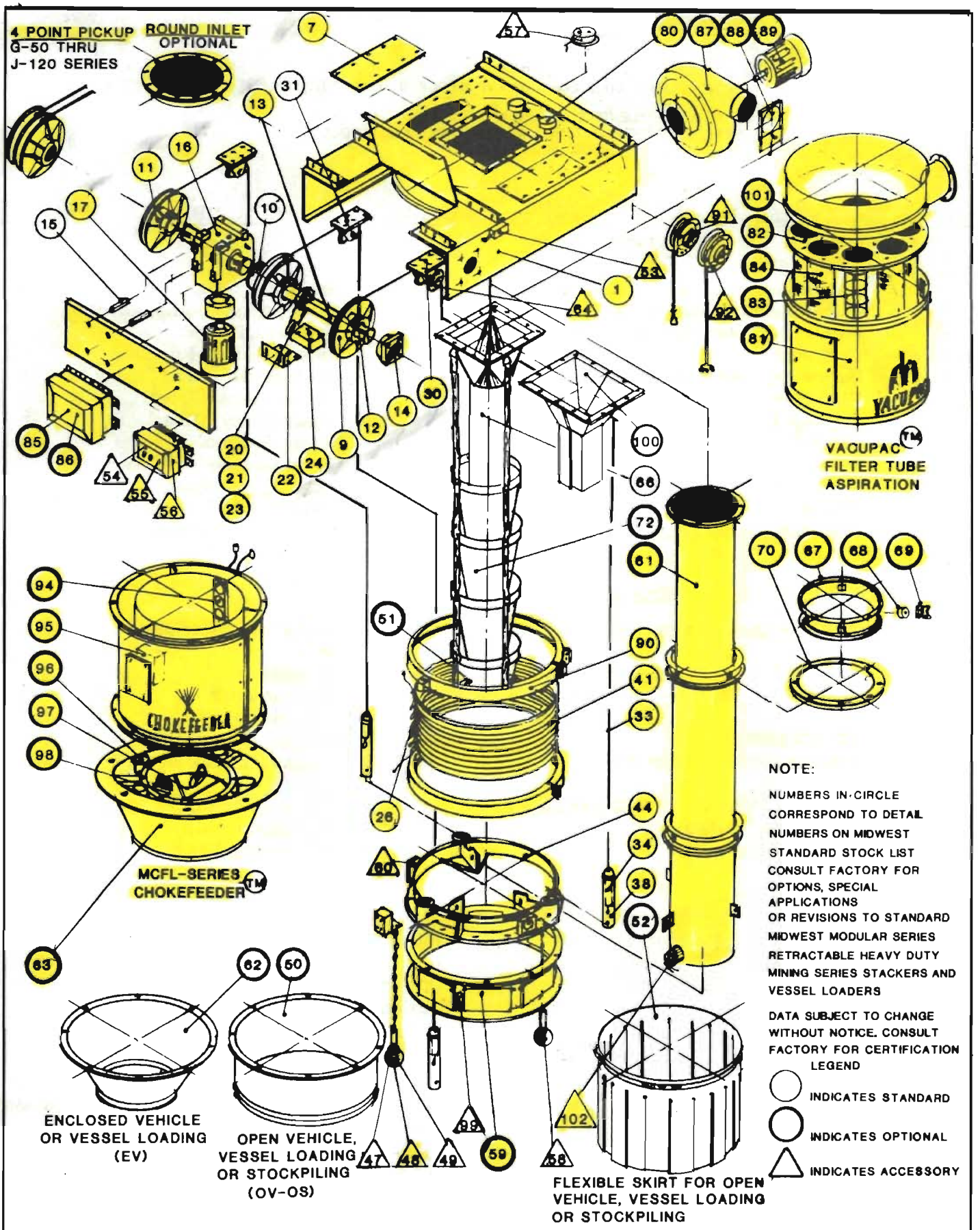
Form 0280



NOTE:

NUMBERS IN-CIRCLE CORRESPOND TO DETAIL NUMBERS ON MIDWEST STANDARD STOCK LIST

CONSULT FACTORY FOR OPTIONS, SPECIAL APPLICATIONS OR REVISIONS TO STANDARD MIDWEST MODULAR SERIES RETRACTABLE HEAVY DUTY MINING SERIES STACKERS AND VESSEL LOADERS

DATA SUBJECT TO CHANGE WITHOUT NOTICE. CONSULT FACTORY FOR CERTIFICATION

LEGEND

○ INDICATES STANDARD

◯ INDICATES OPTIONAL

△ INDICATES ACCESSORY

Midwest International

EXPLODED VIEW

HEAVY DUTY MINING SERIES STACKERS, VEHICLE AND VESSEL LOADERS

FLEXIBLE OUTER SPOUT SERIES

DRAWING NO 1340-E

12/3/86

REVISION DATE NO

ISSUE-07
12/3/86

TECHNICAL SPECIFICATIONS

MIDWEST
RETRACTABLE BULK LOADING AND STOCKPILING SPOUTS,

FLEXIBLE OUTER SPOUT SERIES
BASE UNITS WITH OPTIONS, ACCESSORIES AND MODULES

STANDARD

DETAIL	DESCRIPTION
1	Pan, Main Assembly
7	Plate Covers, Some Models
9	Pulley Assy., Lift./Shaft
10	Coupling
11	Pulley Assy., Lift./Red.
12	Clamp, Cable Assembly
13	Shaft, Drive
14	Bearing
15	Spacer, Reducer Mtg., Some Models
16	Reducer/Gear, Some Models
17	Motor
20	Chain & Sprocket Assy.
21	Chain
22	Bracket Assy., RLS Mounting
23	Sprocket/Driven
24	Switch, Limit, Rotating
26	Line, Anti-Static
30	Sheave Assy./(Front)
31	Sheave Assy./(Rear)
33	Cable Assembly
34	Weight Assembly, Cable
38	Tube Assy., Lifting
41	Outer Spout Assembly
44	Lifting Ring Assembly
66	Venturi Assembly

OPTIONS

DETAIL	DESCRIPTION
50	OV/OS Open Vehicle Vessel Outer Scavenger
51	Inner Scavenger Assy., used with Retractable Venturi Cones Only
52	Skirt, Flexible Rubber or Neoprene
59	Product Relief Doors
61	Rolling Telescoping Tubes
62	EV Enclosed Vehicle Outer Scavenger
63	Chokefeeder (TM). Refer to Drawing for Parts Detail Numbers
67	Rolling Tube Collar
68	Roller
69	Roller Bracket
70	Stop Ring
72	Venturi Assy., Retractable
80	Valve, Pilot Op. Diaphragm
81	Filter Chamber Assembly
82	Tube Sheet Assembly
83	Cage
84	Bag, Filter
85	Encl., Controller
86	Valve, Pilot
87	Blower, Centrifugal
88	Damper, Balancing
89	Motor
90	Ring, Splice Roller
94	Probe Assembly
95	PLC Controller
96	Actuator Assembly
97	Hi-Level Vane
98	Lo-Level Vane
100	Adjustable Venturi
101	Vacupac Strip Heaters

Rotating Product Trimmer - Not Shown

Optional Powered Trimmer - Not Shown

Optional Pivot Gimbal - Not Shown

OPTIONAL ACCESSORIES

DETAIL	DESCRIPTION
47	Probe, Level Sense
48	Probe, Raising Kit
49	Probe, Level Sensing Kit
53	Slack Cable Limit Switch Kit
54	Combination Auto Raise/Level Sense Kit Controller Enclosure
55	Automatic Raising Kit Controller Enclosure and/or Auto Lowering
56	Level Sensing Kit, (Type A, B or C) Controller Enclosure
57	Level Sense Type B, PD Switch
58	Probe, Auto Lowering Kit
60	Air Vibrator Kit
64	Digital Readout
91	Cord Reel, Electric
92	Hose Reel, Pneumatic
99	Relief Door Signal Switch
102	Level Sensing Kit, Type C-1

MIDWEST
CHOKEFEEDER
OPERATING INSTRUCTIONS

These condensed operating instructions are intended to provide operating personnel with the basic information related to the operating of the automatic MIDWEST Chokefeeder.

A complete Instruction Manual covering Assembly, Installation, Operation and Preventive Maintenance will be provided with the final shipment and to the terminal manager. Additional copies will be available upon request.

OPERATION OF
CHOKEFEEDER

1. Position vessel as desired along dockside.
2. Open hatches to be loaded to full open .
3. Extend boom outboard over center of open hatch.
4. Start Vacupac fan.
5. Lower Chokefeeder to floor of vessel.
   Note: When lowering Chokefeeder, the automatic raising probes will stop the spout drive when contact has been made with floor of vessel or the full down position in the rotating up/down limit switch will shut down the drive.
6. The Chokefeeder is now in a "ready to load" position, with the Chokefeeder discharge approximately 18" above the vessel floor.
   Note: Normal automatic mode is all vanes closed at start-up. Vanes open automatically if a low air pressure condition occurs or if power fails.
7. Start belt conveyor feeding product to Chokefeeder.
8. Product will accumulate inside Chokefeeder tub for 3 to 5 seconds before level sensors inside Chokefeeder tub signal PLC controller to open.
   Note: Normal 2 mode operation consists of (4) 70% vanes to open and remain open with (4) 30% vanes modulating open/closed. The computer program can be field adjusted to allow for any combination of vane acutation modes.
9. As product pile builds, initial dust surge should disappear within 5 to 10 seconds and should not escape from the vessel compartment. This surge is caused by the relatively smooth vessel floor accepting the first effect of product discharge.
10. The Chokefeeder retraction drive is signaled by one or more of the (4) automatic raising probes to raise the Chokefeeder module.
    Note: Controller timer adjustment determines the time or distance the Chokefeeder raises above the pile. Raising and stopping are automatic.
11. This cycle is repeated until the compartment is filled with a peak at center of compartment.
12. Topping off each compartment is usually determined by the size of the vessel. When top center pile has been reached, the conveyor is to be shut down and the boom moved to one of the four corners. Repeat steps 5, 6, and 7.
    Note: The Chokefeeder will automatically stop when one or more of the (4) sensing probes contact the pile.

13. Topping off remaining areas within a compartment can be accomplished by repeating step 12.
14. When compartment is considered full, the conveyor is to be shut down, the Chokefeeder raised to the fully retracted position and the loading boom retracted ready for repositioning over the next open hatch.

The objective of the MIDWEST automatic Chokefeeder is to stop the accelerating downward velocity of the product column, contain the dust inside the filtered flexible outer spout with the clean air fan providing this negative pressure.

As the Chokefeeder vanes modulate above the pile, the product is released at a low velocity on the pile, resulting in little or no visible dust.

Referenced Observers of Similar Installations

A. Kermit Pitre, Terminal Manager, Hall-BuckMarine, Port Arthur, TX (713) 983-6271

B. Walter Haynes, Port of Portland, OR (503) 231-5000

C. Robert Foster, Port of Longview, WA (206) 425-3305

D. Mr. Don Duff, Senior Vice President, Hall-Buck Marine, Burnside, LA (504) 675-5387

E. Don Erickson, IMC-Port Sutton, FL (813) 248-1971
Dale Osborne, IMC - Texas City, TX (409) 945-7210

F. Robert Clarke, P.E., Conrail, Philadelphia, PA (215) 596-3499

G. Frank Slavin, P.E., S. T. Hudson Engineers, Philadelphia, PA (215) 564-5100

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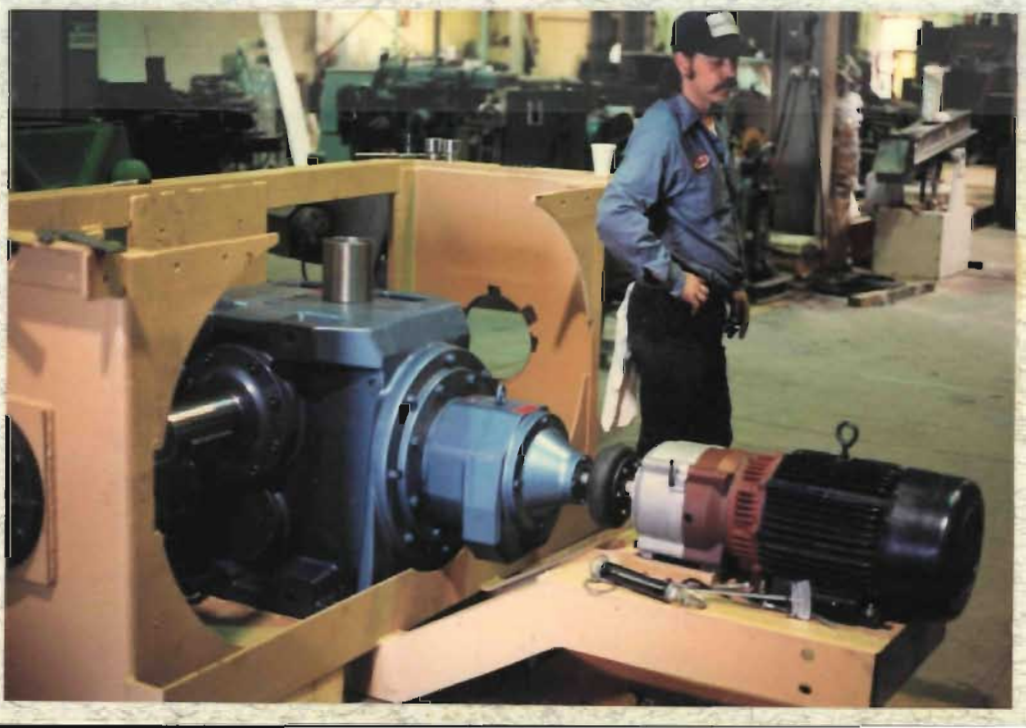
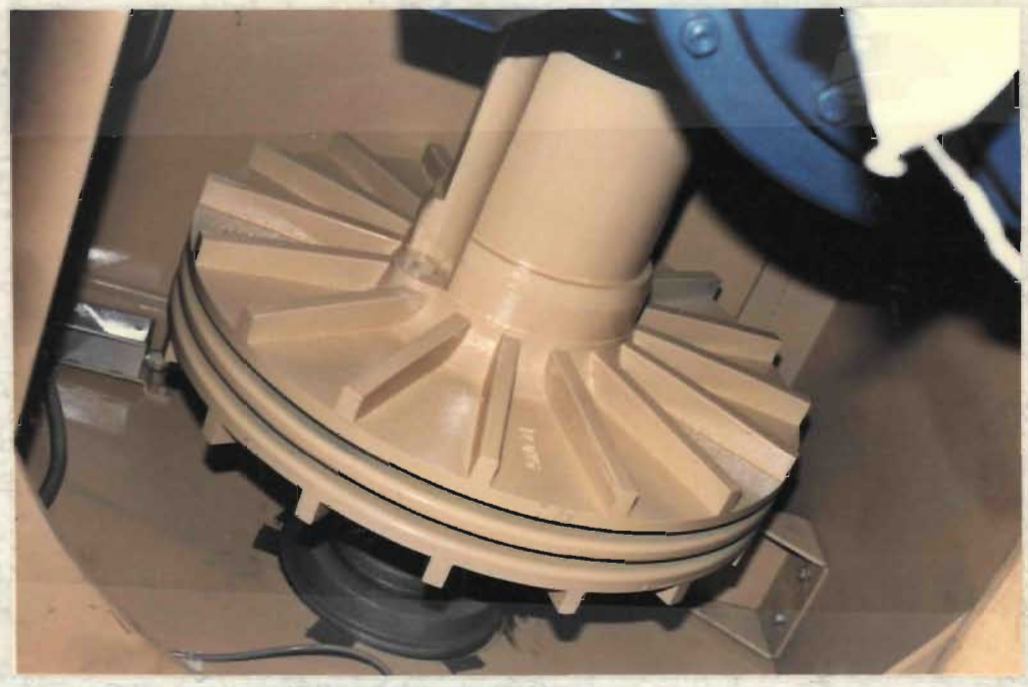
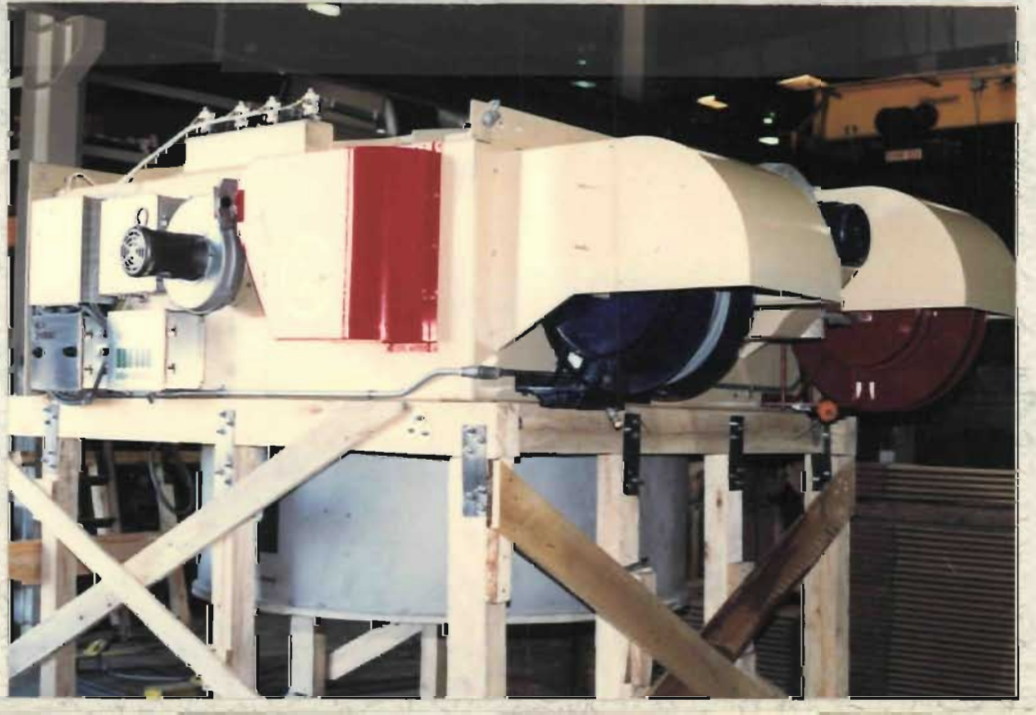
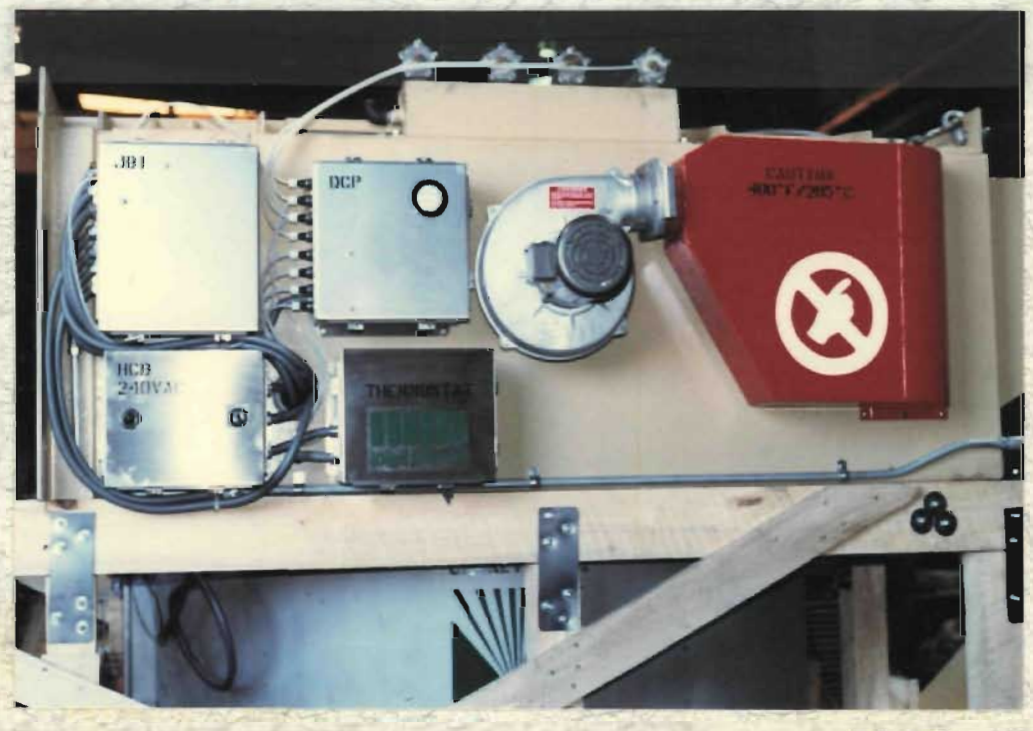
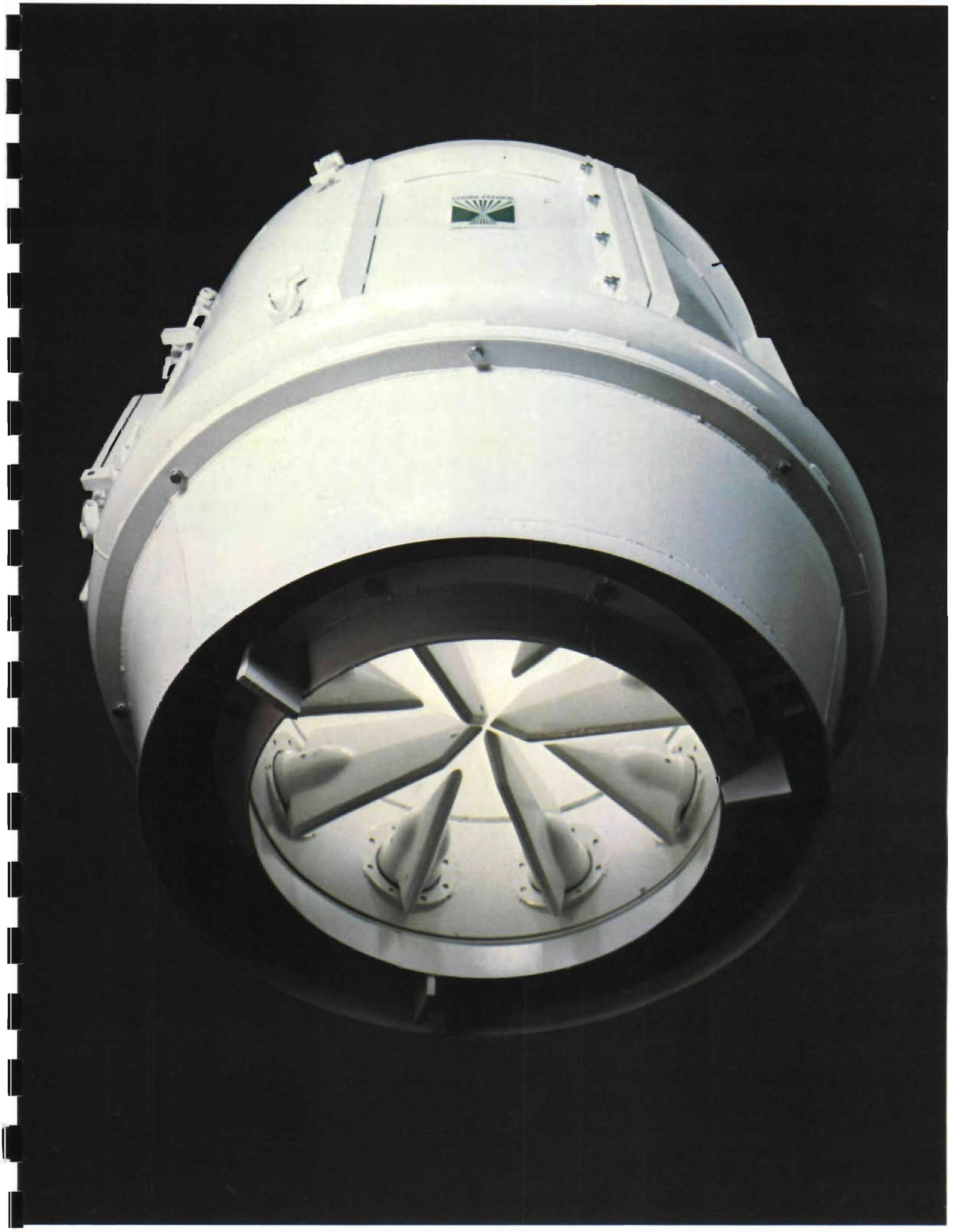







Midwest
International


JBH
DCP
HCB



MIDWEST CHOKEFEEDER™ MODULE

Designed to bolt to the lower discharge end of existing telescoping tubes, conventional MIDWEST retractable bulk loading spouts or MIDWEST Type I or II rolling telescoping tubes. The MIDWEST Chokefeeder module illustrated is ideal for controlling dust with little or no aspiration.

Developed for deep water vessel loading, the 2500 MTPH loader shown, has a flow area of 380 SI and is pictured with all vanes open.

Cast ductile steel modulating vanes, vane hubs and actuator rocker arms assure the user of (5) years of low maintenance dust free loading.

Programmable controls provide vane sequencing to suit a variety of products from fines to 4" lumps. Capacities are available from 100 to 6000 MTPH.

Integral lower support pads allow the Chokefeeder to be placed on the dock, detached from the retractable loader, and stored.

A removable protective housing encloses the primary mechanical, electrical, and operating components. Quick release Cam Loc™ inspection door handles allow easy access to the central lubrication system, as well as all other components, for inspection and service.

Midwest International
A division of
Ron Pair Enterprises, Inc.

Midwest Plaza
105 Stover Road
Charlevoix, MI 49720
Phone: (616)
547-4073/4000
Telex 23-1166

Form No. 0277


LUBE
CENTER
CHOKE FEEDER
International

TYPICAL CHOKEFEEDER™ MODULE WITH PROTECTIVE COVERS REMOVED

With protective covers removed, the MIDWEST Chokefeeder™ can be examined close up.

Heavy duty 250 BHN cast ductile operating vanes (not visible) and cast precision machined vane hubs allow the Chokefeeder to accept and load the most hostile abrasive products with literally no wear.

High performance nickle plated pneumatic actuators move the vanes through their programmed cycle. A numbered central lubrication system assures lubrication to vane shaft hub bearings and rockers. Double labyrinth seals keep dust out and lubrication in.

Static programmable controller provides signals from capacitance proximity probes which modulate the vanes, releasing the product gently on the pile. Pilot air solenoid valves reduce pneumatic piping and are enclosed in a vented enclosure. Electrical requirements from Chokefeeder to spout drive, 4 conductor cable.

A high level plug safety probe opens all vanes if plugging occurs. The vanes also open automatically if air supply drops or in the event of a power failure. Automatic raising probes (not shown) maintain an appropriate discharge height above the pile.

An integral air accumulator assures high volume and consistent pressure to the system and also protects the Chokefeeder from impact.

Three support pads at the discharge of the Chokefeeder allow quick removal and storage on the dock without a special support structure.

Midwest International
A division of
Ron Pair Enterprises, Inc

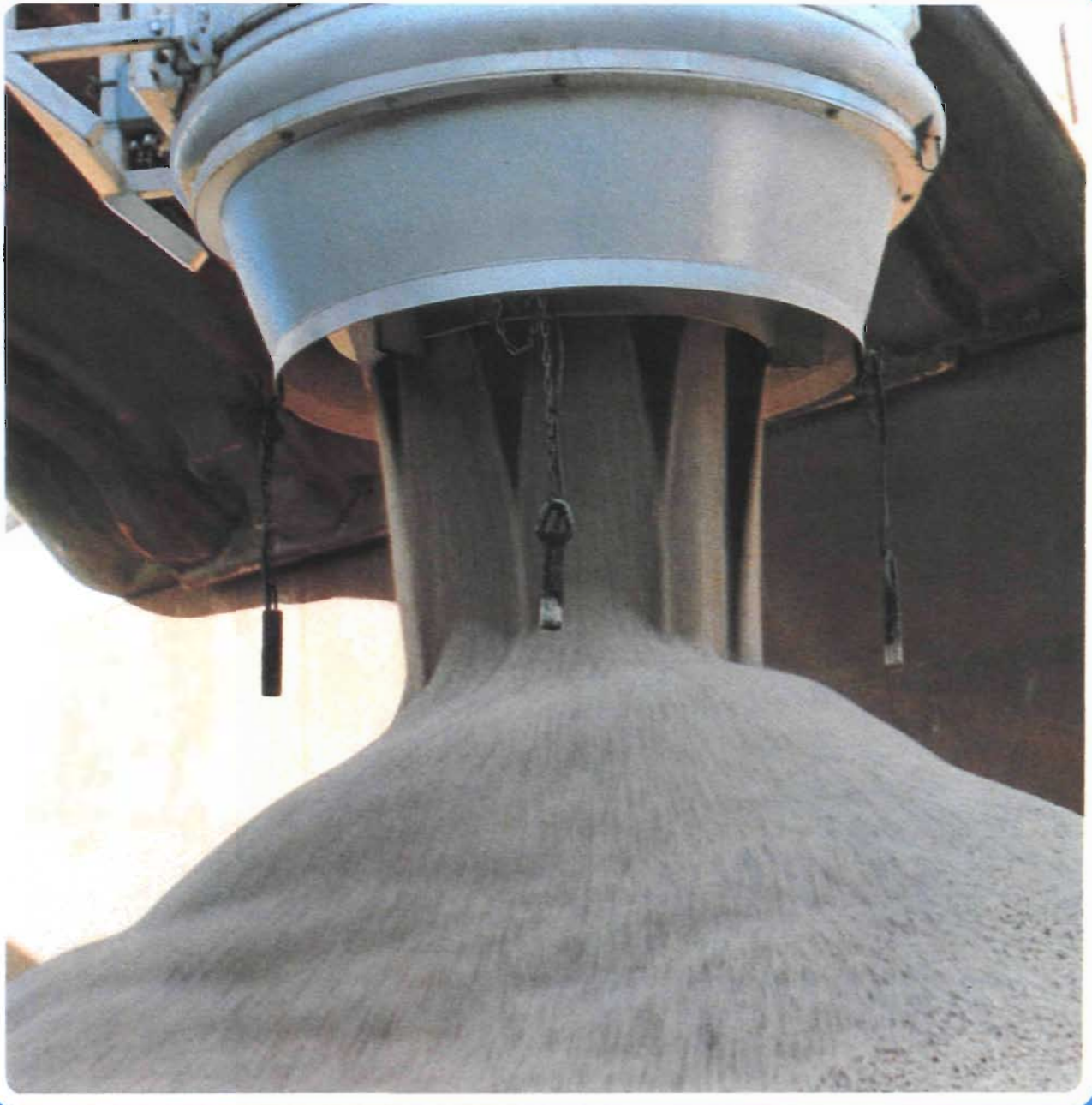
Midwest Plaza
105 Stover Road
Charlevoix, MI 49720
Phone: (616)
547-4073/4000
Telex 23-1166

U.S. and International
Patents Pending

Form No. 0276

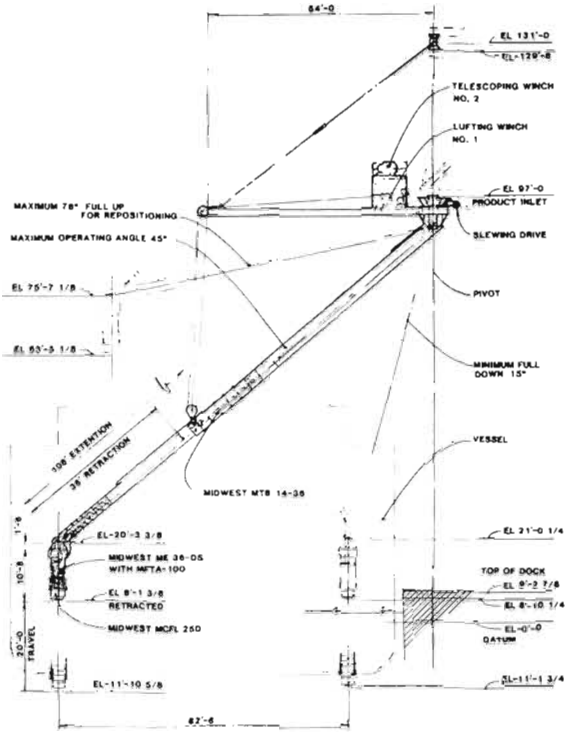
July 1986

INTERNATIONAL BULK JOURNAL



Fertiliser raw materials – trade, transport and handling
A-R-A-G terminals, ship and cargo agents reviewed
International Bulk Congress – final programme previewed

Loading of potash at rates up to 1800tph at the Texas City, Texas plant of International Minerals Corp is facilitated by this MIDWEST International Chokefeeder dust control system. The Texas City terminal loads out potash, soda ash, green coke, and calcined coke and the Chokefeeder enables the facility to comply with standards set by the Environmental Protection Agency of the United States without covering the hatch.



Engineered for deepwater draught vessels, the Hall-Buck Marine Terminal located at Port Arthur in Texas has a complete MIDWEST loadout system including Chokefeeder™ for 800tph loading of soda ash. The all stainless steel system provides contamination free loading of vessels without dust and without use of high maintenance dust piping.

Equipment developments in fertiliser handling

With materials handling in the fertiliser sectors of major importance in terms of overall cost economics, most manufacturers have developed a wide range of products designed expressly for this important market sector. Detailed below are some recent equipment developments.

MIDWEST. Pictured on this month's front cover, and also illustrated by line drawing here, is the MIDWEST International Chokefeeder dust control system. This equipment is currently very successful in use at the IMC Port Sutton, Florida, shipping terminal which handles as many as 12 phosphate fertiliser products including the 68 per cent basic rock raw material, MAP, TSP, and DAP, etc; while a second unit has also been purchased for IMC's Texas City facility loading potash plus soda ash and petroleum coke.

The Chokefeeder™, orginated by MIDWEST in 1979, is a low cost, vane release mechanism that can easily be retrofitted to an existing telescoping chute. MIDWEST can also provide the complete loader or any variation to the basic system up to 6000tph capacity. Although conventional systems with air withdrawal are still available, the Chokefeeder vessel loading system can improve terminal design and reduce energy and operating costs.

Some high speed bulk loadout facilities require up to 50,000cfm of dust evacuation air to vent the cargo hold of a vessel. Costs of this type of system can reach some $1.5 million erected, depending on the system. Using the MIDWEST Chokefeeder loading of most products requires no aspiration or as little as 200 to 5000cfm depending on the product being loaded and the type of conveyor system used. Up to 1500cfm of aspiration can be built into the upper section as an integral filter module, eliminating complex high maintenance dust piping.

Because high volume bag house or scrubber fans are eliminated, significant energy savings can also be realised as most fans run at all times during vessel loading.

Designed for all products with lumps up to four inches diameter and for products as abrasive as phosphate rock, clinker, alumina and petroleum coke, the Chokefeeder can be applied to most applications. It is easy to retrofit, yet can be designed into a new system as well.

Port Arthur Bulk Marine Facility (PAB-FAC). New and expanded bulk transfer facilities were constructed and portions of the old facilities were completely refurbished during 1984. PABFAC consists of dual rail car unloading hoppers, equipment and trackage sufficient to simultaneously unload two rail cars, belt feeders, conveyors, and a high technology loading spout for transferring soda ash and other materials from rail cars to ships or barges at rates of up to 1000tph. Fugitive dust is further suppressed with special flap gates and a metal building enclosure at the rail pit, and a MIDWEST Chokefeeder at the end of the multi-movement loading spout. Additional pollution controls consist of washdown pans beneath conveyors and feeders, waste water treatment equipment, and a package sewage treatment plant. Added trackage was constructed sufficient to hold up to 48 loaded railroad cars and 46 empty cars. The newly refurbished dock structures and recent dredging allow the loading of ships to draughts of 37ft.

The MIDWEST slewing and telescoping spout (30ft of travel) is a state of the art design which includes a "choke feed" dust suppression unit. A total of approximately 800ft³/min of dust collection is utilised, along with other features, to provide minimal dust emissions.

Gramercy Bulk Terminal (GBT). GBT is a Hall-Buck designed, constructed, owned, and operated facility completed in May, 1984, for the purpose of transferring reduction-grade calcined alumina from Kaiser's Gramercy Plant via rail cars to barges. Approximately 0.6mta of alumina is being transferred at this facility, which has a design capacity of 0.4tph. Facilities consist of a railroad siding and storage yard capable of holding up to 30 loaded railroad cars and up to 26 empties simultaneously. Rail cars are moved from Kaiser's Plant with a dedicated locomotive and thereafter with rail car winches. Two belt feeders and three conveyors transfer material nearly 1500ft to the barge loading area. All belt conveyors are totally enclosed and are provided with spillage and wash down collection pans. The MIDWEST Chokefeeder™ vessel loader assures minimal dust emissions.

Reprinted from ***International Bulk Journal IBJ***


3

Midwest International

AN AIR ECOLOGY COMPANY

Founded in July 1970, the MIDWEST Division developed the first successful production version of a retractable bulk loading spout for loading dry dusty products, at high loading rates, into enclosed trucks. Dust free loading of a variety of products was now possible with the product passing down through the unique MIDWEST venturi and scavenger into the vehicle. Displaced air and dust was extracted through an annular area within the same loader, out through a flanged dust outlet and back to a dust collector or scrubber.

The MIDWEST product line expanded from this small inexpensive remotely operated high speed loader into a wide range of products for railcar, truck and vessel loading and associated products and systems.

The MIDWEST product line now includes a variety of basic spout models in addition to Aire-Flo™ conveyors, flow control gates, butterfly valves, centrifugal blowers, control consoles, single or multiple directional spout positioners as well as complete automatic truck, railcar and vessel loading systems, IBC filling stations and a complete product line of heavy duty sliding knife gates.

The MIDWEST Vaculoader® is patented in the U.S., Canada and Japan and the Agriloader™ and Vacupac™ combination dust filter and loading spout enables the application engineer to economically comply with EPA standards without installing additional dust control devices. The MIDWEST Articuloader™ requires no aspiration and loads dusty products... dust free into railcars, trucks and barges. The Chokefeeder™ is especially suitable for vessel loading as high energy dust collection and complex dust piping is eliminated.

Research and development, marketing and sales, as well as the main manufacturing facilities, are located at MIDWEST Plaza in Charlevoix, a small resort community on Lake Michigan in northern Michigan.

MIDWEST continues to remain a specialty company, focusing on strong technology and constantly striving to refine and improve its product line. MIDWEST also has a reputation for application follow up, assistance during start up and product warranties consistent with today's market demands. Full time research and development has resulted in product refinements using the latest in mechanical, plastics, casting and computer technology.

Visits to our company are encouraged where a complete working display area represents the products manufactured by MIDWEST. If you or your project engineers are planning ahead, let MIDWEST assist you in establishing design criteria that will result in years of service from your loadout and dust control system. MIDWEST technology is the best available with most systems designed around standard pre-engineered products with modular construction.

You can look to MIDWEST for industry growth and we hope to make our environments a better place to live.

Photograph opposite side
Midwest Plaza, Charlevoix, MI 49720

MIDWEST

AN AIR ECOLOGY COMPANY
FORM No. 0135
REVISED 4-1-86

NTIS

CSX Meeting 03/27/87

Possible Issues To Be Discussed

Q: Would you mind explaining how the proposed chokefeeder will function?

Q: What features are to be installed on the proposed chokefeeder?

Q: Why does the proposed chokefeeder produce lower emissions at the point of loading than a conventional chute?

Q: What type of phosphate rock is being handled and what is the moisture content?

I: The quantity of emissions to be generated by the proposed modification.

I: The difference between fugitive emissions and unconfined emissions

I: The equivalence of the mass emission limiting standard of 0.03 gr/dscf to the visible emission limiting standard of 10% opacity.

I: The removal of the 44,000 cfm duct from the point of loading does not constitute an emission reduction -- but a relaxation of control.

I: The test method that is to be used to determine the actual emissions and compliance with the standard.

I: The factors limiting the maximum hourly and the maximum annual loading rate of phosphate materials.

Mr. Edwards: The chokefeeder has a shield unlike IMC's. Wants to know what efficiency to apply in order to compare opacity and particulate. VSA -- HCEPC -- says that 10% is about 80% EFF. No problem with reduced hours & 3000 TPH cap

Mr. Thomas: Need to establish and efficiency

Mr. Edwards: Long shore men costs @ 0.5 M/Y. The existing ductwork and chute will remain in place and can be used.

Mr. Thomas: Stay below 10% and you are below 25 T/Y as far as anybody can.

Mr. Edwards: 18' elevation above. will send brochure.

Mr. Harley: Need description of system to put in permit

Mr. Edwards: 15 days to run all test, etc.

3/27/87

Name	Company	Telephone
Bill Thomas	FDER/BAQM	488-1344
Mike Hadley	FDER/BAQM	488-1344
Frank Edmonds	CSX Transportation	904-359-1027

P 408 531 174

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to W. T. Whale CSX Transportation	
P.O., State and ZIP Code 3701 Causeway Blvd. Tampa, FL 33619	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 3/13/87 non-application (state)	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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

3. Article Addressed to:
W.T. Whale
CSX Transportation
3701 Causeway Blvd.
Tampa, FL 33619

4. Type of Service:	Article Number
☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	P 408 531 174

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

5. Signature – Addressee
X A4

6. Signature – Agent
X W. T. Whale

7. Date of Delivery
3-19-87

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

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

March 12, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. T. Whale
Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, Florida 33619

Dear Mr. Whale:

Your application for a permit to modify your present phosphate materials ship loading system by installing a Midwest International Vessel Loader Model MH72-4200 TPH has been forwarded to us by the Hillsborough County Environmental Protection Commission. Since your application proposes a modification to a major facility--the application will be processed by the Department's Central Air Permitting group.

We cannot consider your application to be complete and resume processing it until a permit application fee, as required by Section 403.087(5)(a), Florida Statutes, and pursuant to the schedule in the Florida Administrative Code (FAC) Rule 17-4.050, is submitted to the Department. A copy of each cite is enclosed for your information. This fee is in addition to that required by the Hillsborough County Environmental Protection Commission. The amount of the fee is to be determined on the basis of the potential emissions that are expected to result from the modification. The potential emissions are to be determined on the basis of FAC Rule 17-2.100(147). The amount of this fee cannot be determined from either your original application or your response to the County's incompleteness letter. In both cases, you have not provided us with the reasonable assurance that is required by FAC Rules 17-2.200 and 17-4.070 concerning the estimated quantity of emissions which are expected to result from the proposed modification. A preliminary review of your application and response to the County's incompleteness letter indicates that a fee of either $100 or $250 may be appropriate. If the potential emissions are 25 tons per year or less--then $100 would be the appropriate fee. If the potential emissions are less than or equal to 50 tons per year but more than 25 tons per year--then a fee of $250 would be appropriate.

We also need an accurate assessment of the emissions that are expected to result from the modification in order to determine what provisions of FAC Rule 17-2.510 apply. If your calculations of potential emissions do not provide us with reasonable assurance that the proposed modification will result in an emission increase of less than 25 tons per year--then you will need to comply with the requirements of FAC Rule 17-2.510(4) before the application will be deemed complete. If the emission increase is 25 tons per year or more--then you must submit a recommended LAER, a demonstration of statewide compliance for all of your facilities within the state, a set of acceptable emission offsets, a modeling demonstration of net air quality improvement, and a demonstration of visibility protection for federal Class I areas within 100 kilometers. This information would need to be submitted with the application fee--if the potential emissions indicate that a fee of more than $100 is required.

Please note the following facts. The emission increase is to be the difference between the present actual emissions--based on your most recent emission test--and the potential emissions from the proposed modification. There is nothing in the rules to prevent you from calculating the potential emissions based on written commitments to accept permit conditions that would limit your annual hours of operation to less than 8760 hours per year or your annual operation rate to less than 4200 tons per hour (the indicated capacity of the proposed vessel loader). We ask you to also note that the mass emission limiting standard applicable to the No. 7 dust collector is a grain loading based on dry standard cubic feet per minute and not actual cubic feet per minute. FAC Rule 17-2.100(181) defines standard conditions as 68°F and 14.7 psia. The point is that flows expressed in terms of dry standard cubic feet per minute are usually somewhat less than flows expressed in terms of actual cubic feet per minute.

Presently, we do not have the reasonable assurance that is required by FAC Rules 17-2.200 and 17-4.070 about the quantity of potential emissions expected to result from the proposed modification and the expected emission increase. You will need to provide detailed calculations that show the quantity of potential emissions that are expected to result from the proposed modification and quantify the expected emission increase. These calculations are to include all derivations and justifications of all assumptions. Please be advised that the Department is only

interested in production capacity to the extent that it affects emissions. The rated capacity of the vessel loader that you have selected is 4200 tons per hour when loading material with a density of 60 pounds per cubic foot. This is substantially greater than the maximum loading rate of 3000 tons per hour which you requested in the application. You will need to justify and explain in an attachment to your calculations the factors that limit your loading rate to 3000 tons per hour (i.e., the motors limit the conveyor speed to "x" feet per second). The emissions at the point of loading are presently 0% and the point of loading is vented to an air pollution control device that is subject to a mass emission limiting standard. Since you propose to discontinue the venting of emissions that occur at the point of loading to the No. 7 dust collector--the difference between 0% opacity and the proposed limit of 10% opacity is an emission increase that must be quantified in your calculations.

Your application is deemed incomplete and processing will not resume until the appropriate permit fee and requested information are submitted. If you have any questions or wish to meet with us in Tallahassee, please write to me or call Mike Harley at (904)488-1344.

Sincerely

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

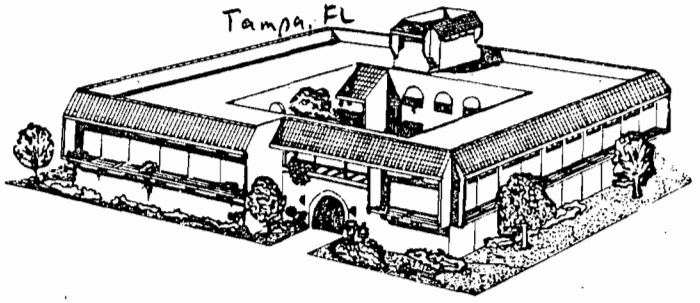
CHF/MH/s

cc: Jerry Campbell, P.E.
Frank C. Edmonds, P.E.
William C. Thomas, P.E.

PM
2-26-87
Tampa, FL

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

RODNEY COLSON
RON GLICKMAN
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
JAMES D. SELVEY
PICKENS C. TALLEY II



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

DER

MAR 2 1987

BAQM

February 25, 1987

Bill T
file
throw away
?

Mr. Frank Edmunds
Associate Engineer of Bridges
CSX Transportation
Rail Transport Group
P. O. Box 45052
Jacksonville, FL 32232-5052

Dear Mr. Edmunds:

Enclosed for your review is a copy of an evaluation of change in emissions at CSX-Tampa's ship loading operation. This attachment is being sent to you as a guideline so you can provide us the acceptable types of calculations we need.

As discussed on the date of this letter, the Bureau of Air Quality Management in Tallahassee, will inform you the application is still incomplete and they will outline the items of incompleteness.

I hope the attachment provides some assistance to you. If I can be of any further help, please call me at (813) 272-5960.

Sincerely,

Victor San Agustin

Victor San Agustin
Senior Air Permit Engineer
Environmental Protection Commission
of Hillsborough County

Attachment

cc: Bill Thomas, BAQM
Bill Thomas, SWFDER

VSA/ch

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

RODNEY COLSON
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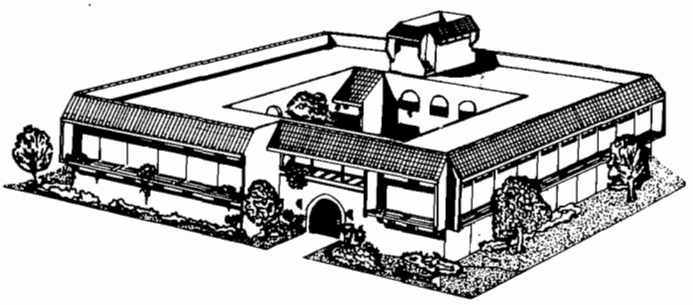

ROGER P. STEWART
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1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

Date February 25, 1987

To Bill Thomas thru Clair Fancy

From Victor San Agustin VSA

Subject: CSX Transportation's New Shiploading Operation

The purpose of this memo is to request that you include the following comments for your incompletion letter on the above project.

A review of Mr. Edmunds' response to my incompletion letter shows that the issue of paying the proper state fee is still not resolved. A conversation with him on the date of this letter indicates that he misunderstood my letter and that he would like to recalculate the proposed and existing emissions. He even mentioned he has no problem sending the $1000 check if that is what his revised calculations will show. I recommend that the Bureau give the applicant another chance to recalculate his proposed and existing emissions.

Furthermore, if the recalculations show that New Source Review requirements are triggered, CSX should be reminded to comply with all applicable NSR requirements ahead of time.

Your consideration of the above matters will be appreciated. If I can be of any assistance, please call me at SC571-5960.

VSA/ch

cc: Bill Thomas, SWFDER

Baghouse Emissions Due To Hold

1985 Throughput 5,381,181 tons

Avg. Operating Schedule 2,445 hrs/yr

Avg. Loading Rate 2,200 tons/hr

Est. Flow (Hold-to-Baghouse) $\frac{44{,}000\ cfm^{a)}}{65{,}000\ cfm^{a)}} \times 62{,}890\ cfm^{b)} = 42{,}572\ cfm$

a) Design Flows - Hold 44,000 cfm - Baghouse 65,000 cfm

b) Test 9-15-86

Hourly Emission Rate 8-8-84 stack test ? 0.83 lb/hr ? 0.001 gr/dscf

Annual Emission Rate $\frac{(0.001\ gr/dscf)(42{,}572\ cfm)(60\ min/hr)(2445\ hr/yr)}{(7000\ gr/lb)(2000\ lb/ton)} = 0.0446\ ton/yr$

Annual Emission Rate (Uncontrolled) $\frac{(2\ lb/ton)^{c)}(5{,}381{,}181\ tons/yr)}{2{,}000\ lb/ton} = 5{,}381.181\ tons/yr$

c) AP-42

Est. Removal Efficiency $\frac{(5{,}381{,}181\ tons/yr - 0.446\ ton/yr)(100)}{5{,}381.181\ tons/yr} = 99.99171\ \%$

Proposed System

Volume of Air Displaced $\frac{(3{,}000\ tons/hr)(2{,}000\ lbs/ton)}{(90\ lb/ft^3)(60\ min/hr)} = 1{,}111.11\ cfm$

Uncontrolled Volume of Air Displaced 1,111.11 cfm - 1,000 cfm = 111.11 cfm

Controlled Emissions $\frac{(1{,}000\ cfm)(90\ lb/ft^3)(60\ min/hr)(2\ lb/ton)(1-0.99)}{2{,}000\ lb/ton} = 54\ lb/hr$

Uncontrolled Emissions $\frac{(111.11)(90\ lb/ft^3)(60\ min/hr)(2\ lb/ton)}{2{,}000\ lb/ton} = 599.99\ lb/hr$

Total Hourly Emissions 599.99 lb/hr + 54 lb/hr = 653.99 lb/hr

Total Annual Emissions (8760 hrs/yr) $\frac{(653.99\ lb/hr)(8760\ hr/yr)}{2000\ lb/ton} = 2{,}864.476\ tons/yr$

Total Annual Emissions (2445 hrs/yr) $\frac{(653.99\ lb/hr)(2445\ hr/yr)}{2000\ lb/ton} = 799.503\ tons/yr$

Controlled Hourly Emissions (Added Fan Capacity)

$\frac{(1{,}111.11\ cfm)(90\ lb/ton)(60\ min/hr)(2\ lb/ton)(1-0.99)}{2{,}000\ lb/ton} = 60\ lbs/hr$

Total Controlled Annual Emissions (Added Fan Capacity & 8760 hrs/yr)

$\frac{(60\ lb/hr)(8760\ hr/yr)}{2{,}000\ lb/ton} = 262.8\ tons/yr$

Total Controlled Annual Emissions (Added Fan Capacity & 2445 hrs/yr)

$$\frac{(60\ lb/hr)(2445\ hr/yr)}{2{,}000\ lb/ton} = 73.35\ tons/yr$$

Apparent Capacity Of Loader

Phosphate rock density 90 lb/ft^3

Loader rated at 4200 tons/hr at 60 lb/ft^3

Assumes capacity to be limited on the basis of volume since a product Venturi is used to force the product into a controlled column. The venturi reduces the vertical product velocity and associated dust. Increased material density would mean a greater mass of material can occupy a given volume within the venturi and spout at any time.

Note design drawings indicate that the loader is actually designed for materials with a density of 100 lb/ft^3.

Apparent Capacity $4200\ tons/hr\left(\frac{90\ lb/ft^3}{60\ lb/ft^3}\right) = 6300\ tons/hr$

Safety Factor 100 lb/ft^3 design vs. 90 lb/ft^3 material density

$$\frac{(100\ lb/ft^3 - 90\ lb/ft^3)(100)}{90\ lb/ft^3} = 11\%$$

Support for this conclusion is the fact that a maximum loading rate of 3,000 tons/hr has been requested in the application. If the loader capacity were limited by product weight then:

Apparent Capacity $4200\ tons/hr\left(\frac{60\ lb/ft^3}{90\ lb/ft^3}\right) = 2800\ tons/hr$

The apparent capacity would then be:

$$\frac{(3000\ tons/hr - 2800\ tons/hr)(100)}{3000\ tons/hr} = 93\%$$ of the requested maximum. It would seem illogical for the applicant to request a permitted maximum rate that exceeds the capability of the equipment.

IT IS MAJOR 1. Minor unless facility is already major ie ≥ 100 TPY —

INCREASE COULD BE SIGN. 2. If major — a restriction in hours on construction permit would avoid N.A. NSR. (Sect 510 — not 500)

3. Potential calculations based on 3000 TPH but mfr. Model MH72 is rated for 4200 TPH. This must also be spec. cond.

DESCREPANCIES AIR FLOW

CONFUSION ABOUT 4. Credit claimed for unit to be replaced must demonstrate RACT compliance (.03 gr/) Otherwise credit cannot be given except for amount complying w/ RACT — DCFM × .03 gr/dscf is key — Not TPH flow.

SE is existing major

∴ If not already a major facility, NCER Dept should do permit since this mod. is not in & of itself major.

Page 1 of 12

O Date Missing - Is this critical?

Engineer states features examined by but crossed out designed by..

O No letter of authorization attached - Is this critical?

Page 2 of 12

V O Project Scheduled to start construction 01/01/87 and complete 02/28/87 - New dates needed?

Total Cost of project shown in C without breakdown

Vicool

V O Response to D shows that permit A029-62812 was amended 12/09/85 - Did the amendment result in an increase in either hourly or annual emissions? The permit was amended to include O&M plan. The issued

Page 3 of 12

point out that would trigger NA new source

O Applicant requests operating time of 8760 hrs/yr - saying that the by the equipment will be subject to continuous operation - but says operation will be based on product demand.

PROJECT IS IN NONATTAINMENT AREA

Has no problem limiting operation to 2445

APPLICANT BELIEVES RACT 17-2.650(2)(c)11. APPLIES

O See if Rule 17-2.650 requires any additional information

Page 4 of 12

O Applicant describes contaminates as Contaminants as

Phosphate Rock	Dust	0.10% Wt	6,000,000 lb/hr
DAP, MAP, GTSP	Dust	0.05% Wt	4,000,000 lb/hr

V Source of information not documented

V O Potential emission calculation is it in error if so - how much

O Resolve descrepency about allowable emissions - This may not be complete.

No control

Vicool thinks should be blank

Page 5 of 12

V O Collection efficiency is said to be 99% based on Mfgs Guarantee and that ~.005μ particles will be collected - where is guarantee & what is size range of phosphate rock particulates?

Operation does not generate liquid or solid wastes

Page 6 of 12

V O Data about emission stack geometry and flow characteristics is not provided - this information should be provided for the fabric filter and hold because characteristics are being changed.

$V_{B/A} = V_A + V_{A/B}$

(SI 1) o Basis for process input rate and product weight is given as a design of 3000 tons/hr for phosphate material with a ρ of 90 lb/ft³ - Do we need further support? [illegible]

(SI 2) o The measured airflow of 38,267 cfm is referenced to permit A029-62812. There is no information to show: [illegible]

victor 1. When this flow was measured

victor 2. How the flow was measured (also how the flow is to be measured)

3. Whether this flow is from the No. 7 dust collector or the ship's hold.

victor 4. Whether the flow is "acfm" or "dscfm"

victor 5. The operation rate when the flow was measured. [illegible]

(SI 3) o The potential emissions have not or at least may not have been calculated correctly.

SI 4 ? o The application does not include all of the design details for the No. 7 dust collector -- i.e. air-to-cloth ratio; or the the bulk loading spout -- i.e. will the spout be vented to the No. 7 dust collector, or to a Vacupac Filter Tube Aspiration Device, or the atmosphere; or the 1000 cfm filter module.

SI 5 o No test or design data to verify the efficiency of the system.

HOW ARE THE EMISSIONS FROM THE STORAGE BUILDING CONTROLLED

SI 9 O Bill Thomas will resolve fee question

Will the company need a BACT or PSD review?

Will there be personnel down in the hold & what will be the effect?

We have rev

- Please explain in detail how the proposed system will change each of the procedures that you presently use to load phosphate materials into ships. Two changes that are of special interest are the proposals to discontinue the use of tarpolins to cover the holds and the elimination of the duct from the ship's hold to the No. 7 baghouse. We will also need to know if the proposed system will necessitate the presence of personnel in the ship's hold during the loading operation.
- The information in your application states that the density of the phosphate materials to be loaded will be 90 pounds per cubic foot. The gravimetric particulate content of phosphate rock, diammonium phosphate, monoammonium phosphate, and granular triple superphosphate are given as 0.10%, 0.05%, 0.05% and 0.05%, respectively. Please identify the sources of this data and, if necessary, show how it was derived.
- Your permit application shows that the maximum operation rate of the proposed loading system will be 3000 tons/hour of phosphate rock which has a density of 90 pounds per cubic foot -- but the proposed vessel loader is rated at 4200 tons/hour when handling material with a density of 60 pounds per cubic foot. Please provide the maximum capacity of the proposed vessel loader when handling phosphate rock, diammonium phosphate, monoammonium phosphate, and granular triple super phosphate. Show any derivations and identify the sources of information used in your calculations. Please describe the physical changes that would have to be made to the remainder of the loading system in order to load products at the maximum capacity of proposed vessel loader.
- The particulate suppression efficiency of the proposed vessel loader is listed as 99% and the minimum size of the particles collected is listed as 0.5 microns. The manufacturer's guarantee is cited as the basis for this information. Please provide a copy of the manufacturer's guarantee, a copy of the derivation that was used to obtain the collection efficiency and minimum

particulate size collected, the procedures that will be used to verify compliance with the manufacturer's guarantee, and the particle size distributions of emissions resulting from the loading of each of the following phosphate rock, diammonium phosphate, monoammonium phosphate, and granular triple superphosphate. The particle size distributions are necessary because Table 8.18-2 of AP-42, our only source of this information, indicates that 3-5 % by weight of the emissions from dryers and calciners are less than 0.5 micron in size.

- The application asks for the emission stack geometry and flow characteristics for each stack. This information will be needed for the No. 7 dust collector and any other emission point that will be affected or created by this change. The information needed for each emission point includes stack height (ft), stack diameter (ft), gas flow rate (ACFM and DSCFM), gas exit temperature (°F), water vapor content (%), and velocity (FPS). We will need to know the design details for each control device that will be affected by or installed as a result of the project. In the case of the No. 7 dust collector the design details need to include the number of compartments presently used, the present air-to-cloth ratio, the number of compartments to be used if the proposed loader is installed and the air-to-cloth ratio if the proposed loader is installed.
- You will need to provide the proposed test methods that will be used to show compliance.
- Since the proposed application contains construction dates that have already passed -- what dates would you like to amend the application to reflect? Chapter 120, Florida Statutes allows us 90 days from the receipt of a complete application to issue a permit.
- Your application states that a 1000 cfm filter module will relieve possible pressure surges during operation. Please describe in detail how this module will function, where it is to be located, whether it will function continuously, where it will be vented to, what will happen to collected particulate, the efficiency of the filter, the filter media, and the source of data.

Vcin 5c

CSX TRANSPORTATION

RAIL TRANSPORT GROUP

Engineering Department

P.O. Box 45052
Jacksonville, FL 32232-5052

RECEIVED 12 1987 MDH
per V.S.A.

February 6, 1987

AZA 881.9 - FCE

Mr. Victor San Agustin
Senior Air Permit Engineer
Hillsborough County Environmental Protection Commission
1900-9th Avenue
Tampa, FL 33605

Dear Mr. San Agustin:

Please recall recent conversations and correspondence concerning CSX Transportation's proposed alterations to its vessel loader at Rockport, Tampa, FL.

In our conversation some concern was expressed over increased emmission with the intended modification.

The present permit specifies that the opacity from the ship hold during loading shall not exceed 10%. The manufacturer of the loading device to be installed warrants that its equipment will operate in that opacity range without covering the hold. This then will be a "break even" situation on fugitive emissions.

Further, Baghouse No. 7 which currently applies 44,000 CFM to the ship hold and thereby generates 47.95 ton/year in emissions shall be disconnected. This, therefore, indicates a net reduction in actual emissions rather than an increase.

Our efforts in this proposal are directed at containing, rather than collecting dust particulates. We believe this equipment will perform this task both efficiently and economically.

Attached are copies of Attachment A-Revised, to reflect the above comments.

Please advise if additional comments or explanations are needed.

Yours truly,

F. C. Edmonds
Associate Engineer of Bridges

CSX Response

CSX TRANSPORTATION, INC.

Application for Permit Amendment
Modification of Unit #7

ATTACHMENT A
Revised 2-6-87

ADDITIONAL DATA

1. Input Rate and Product Weight:

System designed for 3000 tons per hour for 90 pounds per cubic foot of phosphate material.

2. Calculation of Emissions - With Controls From Ship Hold (To Be Removed):

Method

$$\frac{44{,}000 \text{ cfm}^{(a)}}{65{,}000 \text{ cfm}^{(b)}} \times 62{,}890 \text{ cfm}^{(c)} = 42{,}572 \text{ cfm}^{(d)}$$

(a) Design air flow of present unit applied at ship's hold.
(b) Design total air flow of present unit.
(c) Measured air flow (Test dated 9-15-86).
(d) Estimated air flow.

Lbs./Hr.

$$\frac{42{,}572 \frac{\text{ft.}^3}{\text{min.}} \times 60 \frac{\text{min.}}{\text{hr.}} \times 0.030 \frac{\text{gr.}}{\text{ft.}^3}}{7000 \frac{\text{gr.}}{\text{lb.}}} = 10.95 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{10.95 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hr.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 47.95 \frac{\text{tons}}{\text{yr.}}$$

3. Calculation of Emissions - With Controls From Belt No. 9 to Belt No. 10 Transfer (To Remain)

Method

$$\frac{21{,}000 \text{ cfm}^{(a)}}{65{,}000 \text{ cfm}^{(b)}} \times 62{,}890 \text{ cfm}^{(c)} = 20{,}318 \text{ cfm}^{(d)}$$

(a) Design air flow of present unit applied at Belt No. 9 to No. 10 Transfer.
(b) Design total air flow of present unit.
(c) Measured air flow (Test dated 9-15-86)
(d) Estimated air flow.

Lbs./Hr.

$$\frac{20{,}318 \frac{\text{ft.}^3}{\text{min.}} \times 60 \frac{\text{min.}}{\text{hr.}} \times 0.030 \frac{\text{gr.}}{\text{ft.}^3}}{7000 \frac{\text{gr.}}{\text{lb.}}} = 5.22 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{5.22 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hr.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 22.9 \frac{\text{tons}}{\text{yr.}}$$

4. Calculation of Potential Emissions - Without Controls

Reference: Table 8.18-1, AP 42

Emission for transfer and storage = 2 $\frac{\text{lb.}}{\text{ton}}$; Factor C

Lbs./Hr.

$$3000 \frac{\text{tons}}{\text{hr.}} \times 2 \frac{\text{lbs.}}{\text{ton}} = 6000 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{6000 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hrs.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 26280 \frac{\text{tons}}{\text{yr.}}$$

5. Dust Containment Equipment

Existing dust collecting Unit 7, Flow Diagram Location (FDL) 17, with a total capacity of 65,000 cfm distributed 21,000 cfm to FDL 8 (Belts #9 to #10 transfer) and 44,000 cfm to FDL 18 (Ship's Hold) will remain in place. The 44,000 cfm to the ship's hold will be removed and tarpaulins no longer used.

A modular vessel loader with inner telescoping loading tube and an outer flexible dust containment spout will replace existing dust protection and loading chute at the ship's hold. A 1,000 cfm filter module will relieve positive pressure surges during operation.

The current operating permit specifies that the opacity from the ship's hold during loading shall not exceed 10%. The manufacturer of the loader warrants that this equipment will operate within that opacity range without the use of covers on the hold.

ADDITIONAL DATA

1. Input Rate and Product Weight:

System designed for 3000 tons per hour for 90 pounds per cubic foot of phosphate material.

2. Calculation of Emissions - With Controls From Ship Hold (To Be Removed):

Method

$$\frac{44{,}000 \text{ cfm}^{(a)}}{65{,}000 \text{ cfm}^{(b)}} \times 62{,}890 \text{ cfm}^{(c)} = 42{,}572 \text{ cfm}^{(d)}$$

(a) Design air flow of present unit applied at ship's hold.
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Lbs./Hr.

$$\frac{42{,}572 \frac{\text{ft.}^3}{\text{min.}} \times 60 \frac{\text{min.}}{\text{hr.}} \times 0.030 \frac{\text{gr.}}{\text{ft.}^3}}{7000 \frac{\text{gr.}}{\text{lb.}}} = 10.95 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{10.95 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hr.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 47.95 \frac{\text{tons}}{\text{yr.}}$$

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$$\frac{21{,}000 \text{ cfm}^{(a)}}{65{,}000 \text{ cfm}^{(b)}} \times 62{,}890 \text{ cfm}^{(c)} = 20{,}318 \text{ cfm}^{(d)}$$

(a) Design air flow of present unit applied at Belt No. 9 to No. 10 Transfer.
(b) Design total air flow of present unit.
(c) Measured air flow (Test dated 9-15-86)
(d) Estimated air flow.

Lbs./Hr.

$$\frac{20{,}318 \frac{\text{ft.}^3}{\text{min.}} \times 60 \frac{\text{min.}}{\text{hr.}} \times 0.030 \frac{\text{gr.}}{\text{ft.}^3}}{7000 \frac{\text{gr.}}{\text{lb.}}} = 5.22 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{5.22 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hr.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 22.9 \frac{\text{tons}}{\text{yr.}}$$

4. Calculation of Potential Emissions - Without Controls

Reference: Table 8.18-1, AP 42

Emission for transfer and storage = 2 $\frac{\text{lb.}}{\text{ton}}$; Factor C

Lbs./Hr.

$$3000 \frac{\text{tons}}{\text{hr.}} \times 2 \frac{\text{lbs.}}{\text{ton}} = 6000 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/Yr.

$$\frac{6000 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hrs.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 26280 \frac{\text{tons}}{\text{yr.}}$$

5. Dust Containment Equipment

Existing dust collecting Unit 7, Flow Diagram Location (FDL) 17, with a total capacity of 65,000 cfm distributed 21,000 cfm to FDL 8 (Belts #9 to #10 transfer) and 44,000 cfm to FDL 18 (Ship's Hold) will remain in place. The 44,000 cfm to the ship's hold will be removed and tarpaulins no longer used.

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The current operating permit specifies that the opacity from the ship's hold during loading shall not exceed 10%. The manufacturer of the loader warrants that this equipment will operate within that opacity range without the use of covers on the hold.

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

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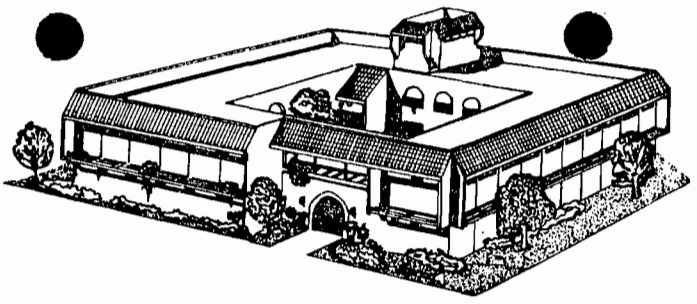


ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

February 4, 1987

Mr. W. T. Whale, Terminal Manager
CSX Transportation
3701 Causeway Blvd.
Tampa, FL 33619

Dear Mr. Whale:

The staff of the Environmental Protection Commission of Hillsborough County and Florida department of Environmental Regulation acknowledge the receipt of your application for a permit to install a chokefeeding system at your shiploading operation.

Pursuant to Section 17-4.05(4)(a), F.A.C., construction permit processing fees are dependent upon your project's potential emissions. They vary from $100.00 to $1000.00. My calculations and a review of your application show potential emissions will be greater than 100 TPY and as such, a $1000.00 processing fee is required. However, based on our discussion on February 3, 1987, you intend to calculate the proposed project's potential emissions and that based on that value, you intend to submit the appropriate fee. We have no objections to your intentions but the issue with the fees must be resolved first before we can process your permit.

Moreover, review of Calculation 2, Attachment A of your application shows the measured flow rate of the existing baghouse #7 is 38,267 cfm. A Method 2 test performed on this baghouse on September 15, 1986, shows the actual flow rate is 62,890 cfm. The latter flow rate seems more appropriate so we recommend you calculate the baghouse #7's new flow rate and proposed emissions calculations based on this value.

Lastly, pursuant to Section 17-2.500(2)(e), F.A.C., New Source Review requirements must be enforced on a proposed installation, if the increase in emissions are greater than or equal to 25 TPY. My calculations show the emissions increase are greater than this value, however, based on our discussion, you intend to evaluate the degree of increase using your own calculations. We would certainly be amenable to reviewing and considering your calculations. If the emissions calculations agree with mine ($\geq$ 25 TPY), you will need to comply with the additional requirements of Section 17-2.500, F.A.C.

Pursuant to Section 17-4.07, F.A.C., your application is deemed incomplete. Further review of your application is temporarily held in abeyance pending resolution of the above issues. Please submit the three calculations requested above and the appropriate state fee no later than March 9, 1987.

Sincerely,

Victor San Agustin

Victor San Agustin
Senior Air Permitting Engineer
Environmental Protection Commission
of Hillsborough County

cc: Bill Thomas, SWFDER
Bill Thomas, BAQM
Frank Edmunds, CSX-Jacksonville

VSA/ch

VICTOR'S 1ST INCOMPLETION LETTER

Attachment A

Evaluation of Change in Emissions at CXS-Tampa

Existing Emissions

1. From Baghouse:

Throughput in 1985= 5,381,131 tons
Average Operating Schedule= 2,445 hrs/yr
Average Loading Rate= 2,200 TPH

Hourly PM Emission Rate=0.83 lbs/hr (0.001 gr/dscf, based on 8/8/84 stack test)

$$\text{Yearly PM Emission Rate}=0.83 \frac{\text{lbs}}{\text{hr}} \times 2{,}445 \frac{\text{hrs}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 1.01 \text{ TPY}$$

2. From Ship's Hold:

Three most recent V.E. tests show emissions are 0% opacity [equivalent to 99% control as per attached memo]

The throughput and operating schedule in 1985 were used to calculate PM emissions

$$\text{Yearly PM Emission Rate}= \frac{2 \text{ lbs}^*}{\text{ton}} \times \frac{5{,}381{,}131 \text{ tons}}{\text{in 1985}} \times [1-0.99] \times \frac{1}{2{,}000} = 53.8 \text{ TPY}$$

$$\text{Hourly PM Emission Rate}= \frac{53.8 \text{ tons}}{\text{year}} \times \frac{2000 \text{ lbs}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{2{,}445 \text{ hrs}} = 44.0 \text{ lbs/hr}$$

*Uncontrolled emission factor derived from Table 8.18-1, AP-42
Existing Total Actual Hourly and Yearly PM Emissions=44.83 lbs/hr & 54.81 TPY

Proposed Emissions

(Used same throughput and operating schedule in 1985)

1. From Baghouse: @0.001 gr/dscf [based on 8/8/84 stack test]

$$\text{Hourly PM Emission Rate}= 0.001 \frac{\text{gr}}{\text{dscf}} \times 21{,}000 \frac{\text{dscf}}{\text{min}} \times \frac{60\text{min}}{\text{hr}} \times \frac{1 \text{ lb}}{7000\text{gr}} = 0.18 \frac{\text{lbs}}{\text{hr}}$$

$$\text{Yearly PM Emission Rate}= 0.18 \frac{\text{lbs}}{\text{hr}} \times 2{,}445 \frac{\text{hrs}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.22 \text{ TPY}$$

2. From Ship's Hold:

Used IMCC"s V.E. test results. IMCC utilizes a similar chokefeeding system.

Date	Test Result	Equivalent Control*
3/22/85	10%	80%
2/14/86	5%	90%
7/9/86	10%	80%

*See attached memo

VICTOR'S

CALCULATIONS

He
Sent ~~to~~
Larry George a copy of
memo on VE-control efficiency
relationship. Says
research. He nor LAG
can locate
MDH

Yearly PM Emission Rate= $\frac{2 \text{ lbs}}{\text{ton}} \times \frac{5,381,131 \text{ tons}}{\text{in 1985}} \times [1-0.80] \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 1076$ TPY

Hourly PM Emission Rate= $1076 \frac{\text{tons}}{\text{yr}} \times \frac{2000 \text{ lb}}{1 \text{ ton}} \times \frac{1 \text{ yr}}{2,445 \text{ hrs}} = 880$ lbs/hr

Proposed Total Actual Hourly and Yearly PM Emissions= 880.18 $\frac{\text{lbs}}{\text{hr}}$ and 1076.22 T

Change in PM Emissions

Hourly= Proposed - Existing = 880.18 - 44.83 = 835.35 lbs/hr - Increase
Yearly= Proposed - Exisitng = 1076.22 - 54.81 = 1021.4 TPY - Increase

AC 29-129122

BEST AVAILABLE COPY

RECEIVED
JAN 7 1987

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

H.C.E.P.C.

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

PAID
H. C. E. P. C.
1-7-87
$385.00

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Dry Phosphate Materials [ ] New[1] [X] Existing[1]

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

COMPANY NAME: CSX Transportation COUNTY: City of Tampa and Hillsborough County

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) Ship Loader

SOURCE LOCATION: Street 22nd Street Causeway & East Bay City Tampa

UTM: East 17- 360.1 North 3088.1

Latitude 27 ° 54 ' 50 "N Longitude 82 ° 25 ' 20 "W

APPLICANT NAME AND TITLE: Mr. W.T. Whale, Manager - Rockport

APPLICANT ADDRESS: 3701 Causeway Blvd, Tampa, FL 33619

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of CSX Transportation

I certify that the statements made in this application for a modification to existing facility 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: W. T. Whale

W.T. Whale, Terminal Manager-Rockport
Name and Title (Please Type)

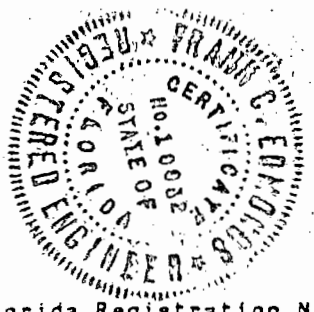
CSX Transportation
Date: _____ Telephone No. (813)248-8111

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

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 Frank C. Edmonds

Frank C. Edmonds
Name (Please Type)

CSX Transportation
Company Name (Please Type)

P.O.B. 45052, Jacksonville, FL 32232-5052
Mailing Address (Please Type)

Florida Registration No. 10832 Date: _____ Telephone No. (904)359-1027

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.

This application is to replace the loading chute, dust collection chute and coverings at the ship hold with a retractable bulk loading spout with flexible outer spout for added dust control. Other functions of Baghouse No. 7 will not be changed.

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

Start of Construction January 31, 1987 (on site) Completion of Construction February 28, 1987

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.)

Total Unit $300,000.00

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

A 029-62812 Issuance date - 12-01-82

Amendment date - 12-09-85

Expiration date - 11-29-87

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr _____; if seasonal, describe: Equipment will be subject to continuous operation; however, actual operation will depend upon public demand for export of phosphate products.

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

1. Is this source in a non-attainment area for a particular pollutant? Yes

   a. If yes, has "offset" been applied? No

   b. If yes, has "Lowest Achievable Emission Rate" been applied? No

   c. If yes, list non-attainment pollutants. Phosphate particulates.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

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

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? ~~No~~ Yes DAE

   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 justification for any answer of "No" that might be considered questionable.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Phosphate Rock	Particulates	0.10	6,000,000	18
DAP	"	0.05	4,000,000	18
MAP	"	0.05	4,000,000	18
GTSP	"	0.05	4,000,000	18

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

1. Total Process Input Rate (lbs/hr): 6,000,000 Max

2. Product Weight (lbs/hr): 6,000,000 Max

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulates	6.66	29.2	17-2.650(2)(C)11.	N/A	6000	26,280	18

[1]See Section V, Item 2.

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

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Midwest International	Particulates	99%	0.5	Mfg.Guarantee
Modular Vessel Loader-				
Model MH72-4200 TPH				

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. N/A

Annual Average _____ Maximum _____

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

N/A

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

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 (lbs/hr)							

Description of Waste _____

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

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

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

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

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

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

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   See Attachment A, Paragraph 1.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Attachment A, Paragraph 2.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See Attachment A, Paragraph 3.
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
   See Attachment A, Paragraph 4.
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.
   See Attachment B.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
   See Attachment C.
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.
   Not Applicable.

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.

NOT APPLICABLE

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

NOT APPLICABLE

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ ( ) SO_2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)_____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^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.

Application for Permit Amendment
Modification of Unit #7

ADDITIONAL DATA

1. Input Rate and Product Weight:

System designed for 3000 tons per hour for 90 pounds per cubic foot of phosphate material.

2. Calculation of Emissions - With Controls (Estimated)

Method

$$\frac{44{,}000 \text{ cfm}}{65{,}000 \text{ cfm}}\ {}^{(a)}_{(b)} \times 38{,}267\ {}^{(c)}\text{cfm} = 25{,}904 \text{ cfm}\ {}^{(d)}$$

(a) Design air flow of present unit applied at ship's hold.
(b) Design total air flow of present unit.
(c) Measured air flow (Permit No. A029-62812).
(d) Estimated air flow.

Lbs./hr.

$$\frac{25{,}904 \frac{\text{ft.}^3}{\text{min.}} \times 60 \frac{\text{min.}}{\text{hr.}} \times 0.030 \frac{\text{gr.}}{\text{ft.}^3}}{7000 \frac{\text{gr.}}{\text{lb.}}} = 6.66 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/yr.

$$\frac{6.66 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hr.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 29.2 \frac{\text{tons}}{\text{yr.}}$$

3. Calculation of Potential Emissions - Without Controls

Reference: Table 8.18-1, AP 42

Emission for transfer and storage = 2 $\frac{\text{lb.}}{\text{ton}}$; Factor C

Lbs./hr.

$$3000 \frac{\text{tons}}{\text{hr.}} \times 2 \frac{\text{lbs.}}{\text{ton}} = 6000 \frac{\text{lbs.}}{\text{hr.}}$$

Tons/yr.

$$\frac{6000 \frac{\text{lbs.}}{\text{hr.}} \times 8760 \frac{\text{hrs.}}{\text{yr.}}}{2000 \frac{\text{lbs.}}{\text{ton}}} = 26{,}280 \frac{\text{tons}}{\text{yr.}}$$

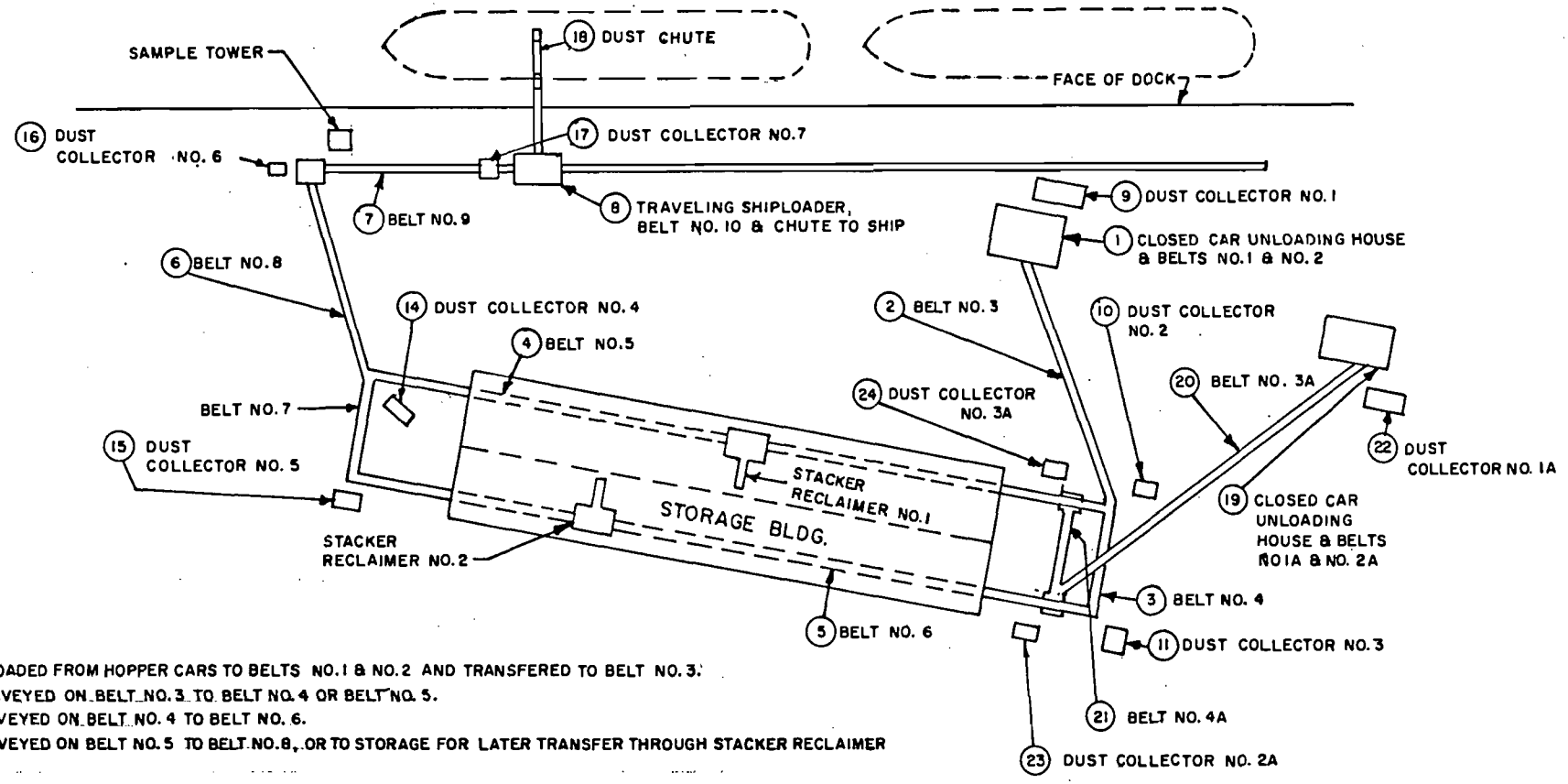
4. Dust Containment Equipment

Existing dust collecting Unit 7, Flow Diagram Location (FDL) 17, with a total capacity of 65,000 cfm distributed 21,000 cfm to FDL 8 (Belts #9 to #10 transfer) and 44,000 cfm to FDL 18 (Ship's Hold) will remain in place. The

4. Dust Containment Equipment (Cont'd)

44,000 cfm to the ship's hold will be removed and tarpaulins no longer used.

A modular vessel loader with inner telescoping loading tube and an outer flexible dust containment spout will replace existing dust protection and loading chute at the ship's hold. A 1000 cfm filter module will relieve positive pressure surges during operation.



(1) MATERIAL UNLOADED FROM HOPPER CARS TO BELTS NO.1 & NO.2 AND TRANSFERED TO BELT NO. 3.

(2) MATERIAL CONVEYED ON BELT NO. 3 TO BELT NO. 4 OR BELT NO. 5.

(3) MATERIAL CONVEYED ON BELT NO. 4 TO BELT NO. 6.

(4) MATERIAL CONVEYED ON BELT NO. 5 TO BELT NO. 8, OR TO STORAGE FOR LATER TRANSFER THROUGH STACKER RECLAIMER TO BELT NO. 8.

(5) MATERIAL CONVEYED ON BELT NO. 6 TO BELTS NO. 7 & NO. 8, OR TO STORAGE FOR LATER TRANSFER THROUGH STACKER RECLAIMER TO BELTS NO. 7 & NO. 8.

(6) MATERIAL CONVEYED ON BELT NO. 8 TO BELT NO. 9 - MATERIAL AUTOMATICALLY SAMPLED AT SAMPLE TOWER.

(7) MATERIAL CONVEYED ON BELT NO. 9 TO TRAVELING SHIPLOADER AND BELT NO. 10.

(8) MATERIAL CONVEYED ON BELT NO. 10 TO CHUTE TO SHIP.

(9) DUST COLLECTED THROUGHOUT (1) AND RETURNED TO BELTS NO1 & NO. 2.

(10) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELT NO. 4 OR NO. 5.

(11) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELT NO. 6.

(14) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELT NO. 8.

(15) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELT NO. 7.

(16) DUST COLLECTED AT BELT TRANSFER, THROUGHOUT THE SAMPLE TOWER AND RETURNED TO BELT NO. 9.

(17) DUST COLLECTED AT (8) & (18) AND RETURNED TO BELT NO. 9.

(18) DUST COLLECTED AT BELT NO. 10 & SHIP'S HOLD AND RETURNED TO BELT NO. 9. SHIP'S HATCH COVERED DURING LOADING.

(19) MATERIAL UNLOADING FROM HOPPER CARS TO BELTS NO. 1A & 2A AND TRANSFERRED TO BELT NO. 3A.

(20) MATERIAL CONVEYED ON BELT NO. 3A TO BELT NO. 4A OR BELT NO. 6.

(21) MATERIAL CONVEYED ON BELT NO. 4A TO BELT NO. 5.

(22) DUST COLLECTED THROUGHOUT (19) AND RETURNED TO BELTS NO. 1A & 2A.

(23) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELTS NO. 6 OR NO. 4A.

(24) DUST COLLECTED AT BELT TRANSFER & RETURNED TO BELT NO. 5.

ATTACHMENT B

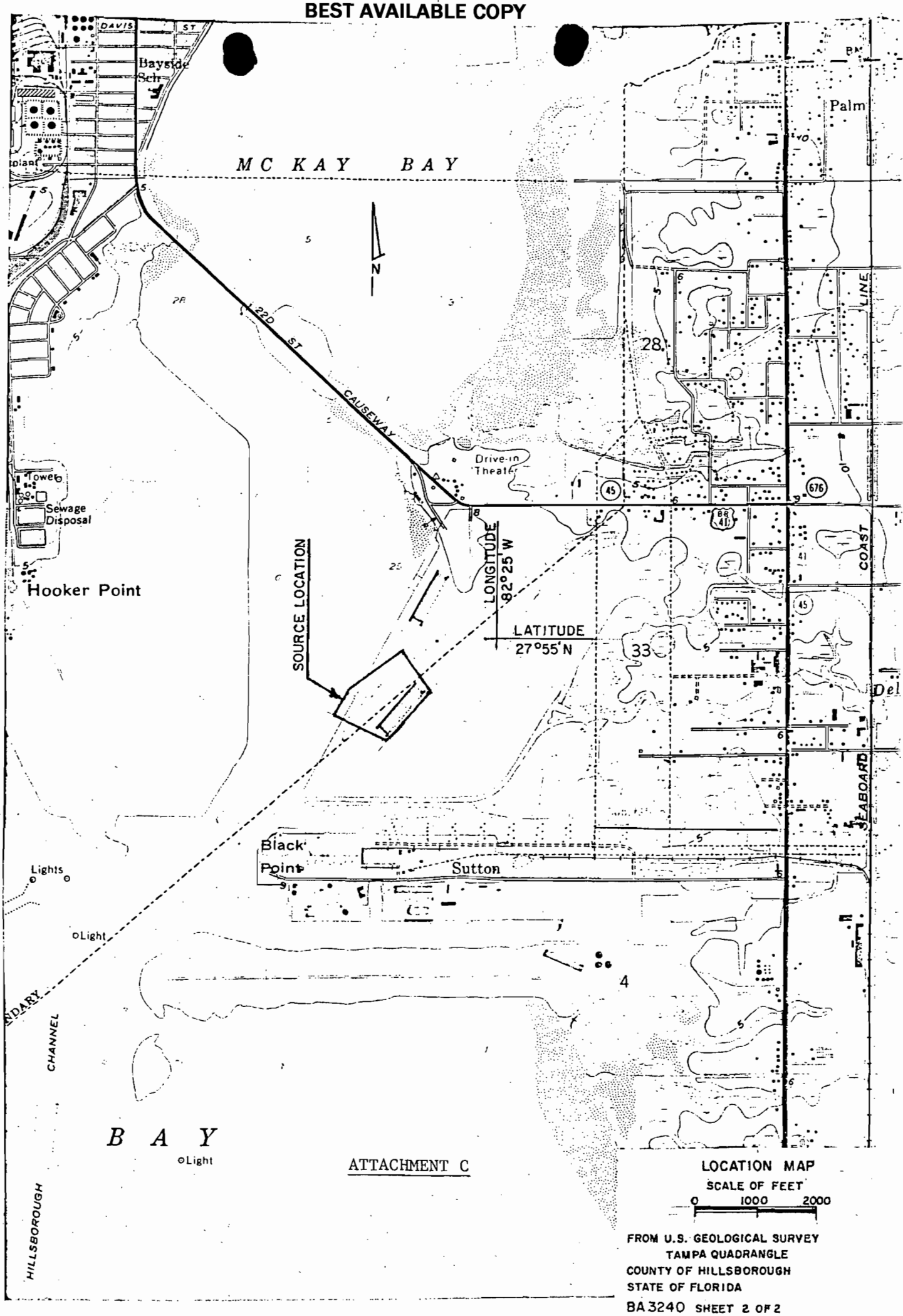
SEABOARD SYSTEM RAILROAD
OFFICE OF ENGINEER OF BRIDGES - JACKSONVILLE, FLA

FLOW DIAGRAM
ROCKPORT PHOSPHATE ELEVATOR
TAMPA, FLA.

SCALE: NONE

APR. 20, 1982
REV. FEB. 10, 1983

BA 3240



ATTACHMENT C

LOCATION MAP
SCALE OF FEET
0 1000 2000

FROM U.S. GEOLOGICAL SURVEY
TAMPA QUADRANGLE
COUNTY OF HILLSBOROUGH
STATE OF FLORIDA

BA3240 SHEET 2 OF 2

CSX Transportation
Chokefeeder Project
Rockport Terminal
MIDWEST Proposal QS 0920 A

BEST AVAILABLE COPY

Midwest International

TECHNICAL SPECIFICATIONS

MIDWEST
RETRACTABLE BULK LOADING AND STOCKPILING SPOUTS,

FLEXIBLE OUTER SPOUT SERIES
BASE UNITS WITH OPTIONS, ACCESSORIES AND MODULES

DESIGN CRITERIA: The MIDWEST equipment described in this technical specification is designed to be applied as base units capable of accepting a variety of optional modules and accessories allowing the application engineer to design a retractable bulk loader or stockpiling spout tailored to a specific application using standard pre-engineered components. The completed assembly can load or stockpile dry dusty products at high capacities and reduce or eliminate dust in compliance with most EPA regulations and is considered by most agencies to be the best available technology in terms of dust control.

DESCRIPTION: The MIDWEST modular vessel loader and/or stockpiling spouts are designed to be installed at the discharge end of a ship or barge loading conveying boom, air gravity conveyor or diagonal vessel loading chute. Raw material stockpiling applications usually require the MIDWEST equipment to be installed on the discharge chute of a radial or fixed conveyor stacker or tripper conveyor. Product passes through the spout inlet and down through the internal retractable section of the spout which can be rolling telescoping tubes or retractable cones. A reversing electric motor drive and lifting mechanism retracts or extends the spout discharge maintaining a consistent dimension above the pile. Using the flanged dust outlet, the spout can be vented back to a dust collector or a dust filtration module and a vent fan can be added to the base unit. A MIDWEST Chokefeeder module or slitted flexible skirt can also be added to the spout discharge depending upon the type of product being handled and the degree of dust control desired. For vessel trimming, a rotating powered spoon is available. All options, accessories and modules listed in this technical specification can be added to the base unit to suit specific applications. MIDWEST equipment and options described are trademarks registered and may be patented in the U.S. and other countries.

Base Model	MD30	400 TPH*
Base Model	ME36	750 TPH
Base Model	MF42	1500 TPH
Base Model	MG50	2400 TPH
→ Base Model	MH72	4200 TPH
Base Model	MI96	6000 TPH

* Capacities are based on 60 PCF fines with flooded product inlet.

GENERAL SPECIFICATIONS

Main Frame: ASTM-A-36 carbon steel, all welded box construction with access door over all drive end components.

Product Inlet: Flanged to allow unit to be bolted to a MIDWEST sliding knife gate, withdrawal valve, screw, belt or drag conveyor discharge, airslide discharge box or fabricated transition. 30"x30"

Dust Outlet: Flanged dust outlet(s) standard on all base units. Designed to allow installation of integral modular filter clean air fan AR dirty air fan, or can be connected to a remote dust collector.

Retractable Spout Drive: Electric motor retraction drive with 460 VAC, 3 PH, 60 Hz 1.0 service factor TEFC motor and reducer mounted under main pan for weather protection. Note: Optional motor positions available. Rotating NEMA 4 up/down DPDT limit switch (2) position. Note: This switch must be field adjusted for full up/down travel to protect the gear reducer from damage. Cable lifting pulleys precision machined cast ductile, keyed to shaft with couplings. Three (3) or four (4) point cable pick up to stabilize spout in high winds. Drive lifting cable 7 x 19 galvanized wire rope connected to adjustable sash weights inside lifting tubes for final leveling of spout. Drive access door on top of retractable spout main frame to provide installation and maintenance access to all drive components. Cable transfer sheaves cast steel, bronze bushed, with lubrication fittings and keepers to prevent lifting cable snarling. Note: Refer to MIDWEST Terms and Conditions of Sale, Form No. 0013, for product warranty.

Product Venturi: Standard venturi sized to load maximum product capacity specified. Specify materials of construction, Class I, II, III or V. When fully flooded with product, the venturi will form the product into a controlled column decreasing vertical product velocity and reducing dust caused by column acceleration. Refer to inner cone and rolling tube options and to optional adjustable venturi.

Vertical Useful Travel: Travels available to 100'. Refer to Drawing No. 1301.

Flexible Outer Spout: Standard cross stitched vinyl or neoprene coated polyester or nylon fabric double lock stitched with 6061-T6 extruded aluminum outer rings and half round 6061-T6 extruded aluminum inner rings compressing fabric into concave area on back side of outer ring. Aluminum extrusions have rounded edges to avoid shearing of fabric and are riveted to inside ring with fabric compressed between rings. Top and bottom rings secured to top of spout and lifting ring with zinc plated lock bolts. Note: Other materials available.

Lifting Ring: Cast ductile precision machined one piece lifting ring with mounting holes for lower scavenger taper, all models through MF42 Series. Larger base units are heavy duty weldments.

OPTIONS:

Pivot Gimbal: Structural product gimbal to allow lufting conveying boom to raise and lower while maintaining a plumb or vertical spout attitude. Available in Class I, II, III and V construction.

Adjustable Venturi: Manual or electric, specify; Class I, II , III and V available.

Standard Venturi with Rock Box: Specify self cleaning for a variety of products and/or replaceable wear spool. Class II, III and IV available.

Retracting Cones: For product column control. Specify full travel or partial travel. Class I, II, III, IV and V available.

Rolling Telescoping Tubes: For product column control. Full travel. Class I, II, III, IV and V available. Refer to drawing for method of suspension and details.

Prewiring, Sub Assemblies and/or Modules: All prewired to NEMA 4X junction boxes with numbered terminal strips to facilitate assembly and installation. Includes all accessories or options ordered with equipment. Excludes electric motors. Automatic raising, level sensing enclosures are shipped loose for field installation unless specific location on spout is indicated on certified drawings.

Complete Mechanical Assembly: If common carrier or railcar dimensions permit, MIDWEST can completely assemble the equipment to facilitate installation. Final adjustments to rotating up/down limit switch and other options and accessories must be field adjusted. Refer to Installation Manual for specific unit.

Prewiring, Complete Assembly: Optional if unit can be shipped completely assembled. Includes all options and accessories ordered with equipment. Motor wiring excluded and automatic raising, lowering or level sensing enclosures which are shipped loose for field installation unless specific location on spout is indicated on certified drawings.

OPTIONAL ACCESSORIES:

Automatic Raising Kit: For (OV/OS) open vehicle or vessel loading or open stockpiling only. Tilt switch probe attached to cast lifting ring raises spout when tilted by product or by slitted skirt flaring out as the skirt conforms to the pile of product. Controller with NEMA 4X enclosure is shipped loose and includes green "Normal" and red "Raising" indicator lights. Static time delay included to allow spout discharge to raise as product pile increases in height avoiding plugging of spout.

Automatic Lowering Kit: Designed to be used with automatic raising kit in open stockpiling or vessel loading applications. Automatic lowering sensing probe(s) will allow spout to automatically extend down into a rat hole or valley to maintain a close relationship between spout and pile. Controller NEMA 4X shipped loose.

Level Sensing Kit, Type A: For (EV) enclosed vehicle or vessel loading only. Tilt switch probe NEMA 4 attached to lower scavenger discharge to detect full vehicle or vessel and to send signal to controller which is shipped loose for field mounting. Enclosure includes NEMA 4X construction with green "Normal" and red "Full" indicator lights. Static time delay included to delay signal allowing field adjustment of product level.

Combination Automatic Raising-Level Sensing Kit: For (EV/OV) enclosed or open vehicle or vessel loading. Controller consists of NEMA 4X enclosure with red and green indicator lights and (2) position selector switch to allow operator to select either "enclosed vehicle or vessel loading" or "open vehicle or vessel loading." Selector switch directs probe signal to either indicate a full vehicle when loading enclosed vehicles or will raise spout discharge above product pile to avoid plugging of spout. Controller shipped loose for field mounting.

Level Sensing Kit, Type B: For (EV/OV) applications. Indicates a plugged condition within the spout. The pressure differential switch is designed to be set within an acceptable operating range and to sense the static pressure variation inside the flexible outer spout area. When activated, the signal can be used to shut down the product feed, sound an alarm or raise the spout.

Level Sensing Kit, Type C and C1: For (EV) enclosed vehicle or vessel loading only. Same as Type A except NEMA 4 capacitance proximity probe or Type C1 used as a plug switch installed in lower product control tube between inner and outer scavenger or in product relief door module. Refer to drawing for details.

Air Vibrator Kit: For (EV) enclosed vehicle or vessel loaders only. Two (2) ball type air vibrators located on lower cast lifting ring to vibrate loose product from inside of spout after loading. Air manifold and festooning of air line up to top of main pan and connected to 115 VAC NEMA 4 solenoid valves with ½" NPT female ports. Air supply to be field connected to valve by others.

Intermediate Position Limit Switch Contacts: For open stockpiling only. Allows setting between full up and full down of rotating up/down limit switch. Designed to determine when maximum pile height is reached, stopping product feed and raising spout to full up position. Applicable for fixed, radial and tripper stockpiling.

Slack Cable Limit Switch Kit: Automatically stops spout drive when spout discharge contacts enclosed vehicle hatch, open vehicle obstruction or open vessel hatch coaming preventing continued motorized extension. This signal also can automatically start continuous timed purging cycle if filter module is used. Two (2) NEMA 4/12 lever limit switches with special lever rollers respond to a slack lifting cable condition. NEMA 9 enclosures available.

Product Relief Door Plug Limit Switch Kit: Designed to send signal to spout feed when product relief doors open signaling a plugged condition. Specify enclosures. NEMA 4 (standard) and NEMA 9 (available).

Pneumatic Hose Reel: Spring tensioned pneumatic reel to provide air supply from top main spout frame to lower retractable spout discharge, providing air to Chokefeeder module, trimmer or other pneumatic actuated options.

Electric Cord Reel: Spring tensioned electric reel to provide electric power to lower retractable spout discharges in place of standard festooned flat ribbon cable. Specify enclosure, NEMA 4 (standard) or NEMA 9 (available).

Digital Travel Readout: Electronic vertical spout travel readout calibrated in feet or meters allowing operator to monitor vertical position of spout lower discharge or translated into pile height. Designed to provide operator pile height during open stockpiling.

Field supervision of erection and/or start up by MIDWEST is $425.00 per diem, plus expenses and travel at cost.

Two (2) installation, Operating and Maintenance Manuals provided, one shipped with equipment and one sent to Purchasing Department at time of shipment. Additional copies at $40.00 each.

MATERIALS OF CONSTRUCTION: Specify

Class I:	Moderately Abrasive Fines
Class II:	Abrasive Granules, 250 BHN
Class III:	Stainless Steel Product Area
Class IV:	High Temperature, 175/1000 Degrees F
Class V:	High Impact, 450 BHN

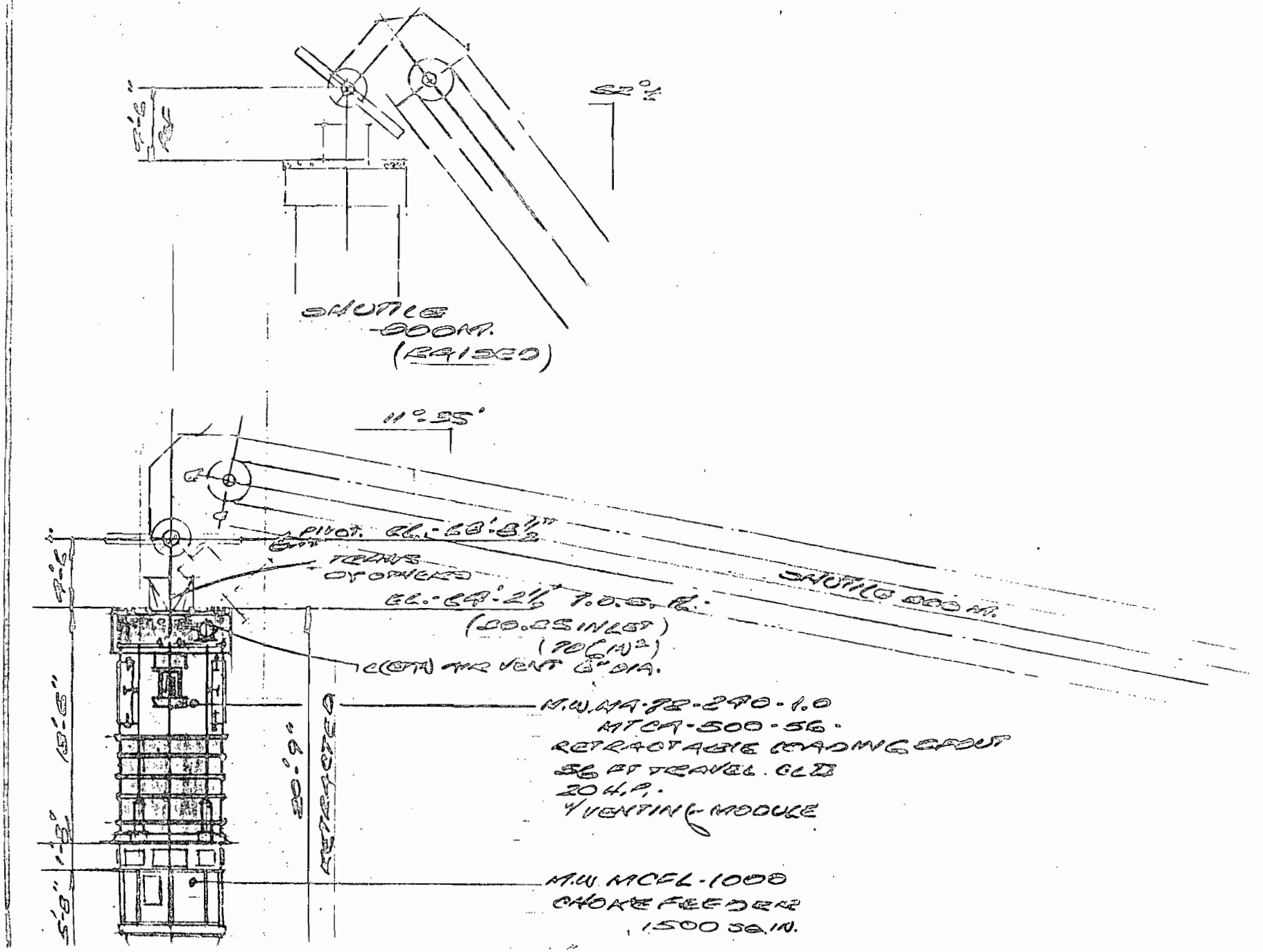
MOTOR AND ELECTRICAL ENCLOSURES: Specify

Motor: (Standard), Totally Enclosed, Fan Cooled
XP (Available), Explosion Proof
IEC (Available), International Electrical Code

Enclosures: NEMA 12 (Standard), Gasketed, Dust Tight
Dust and Water Tight (Standard and/or Available)
(Standard), Junction Boxes Only, Chemical Duty, Dust and Water Tight
NEMA 9 (Available), Explosion Proof

Note: Option - To be specified with purchase of new equipment.
Optional Accessory - Can be purchased as a kit and field installed.

Form 0280



DESIGN WEIGHTS:

NET WEIGHT (STATIC) 21,270 LBS
" (OPERATING) 27,590 LBS
(PLUGGED) 61,312 LBS.

WEIGHTS BASED ON 100 PSF DESIGN BASIS NOT INCLUDING TRANSITION AT EL. 64'-2½"

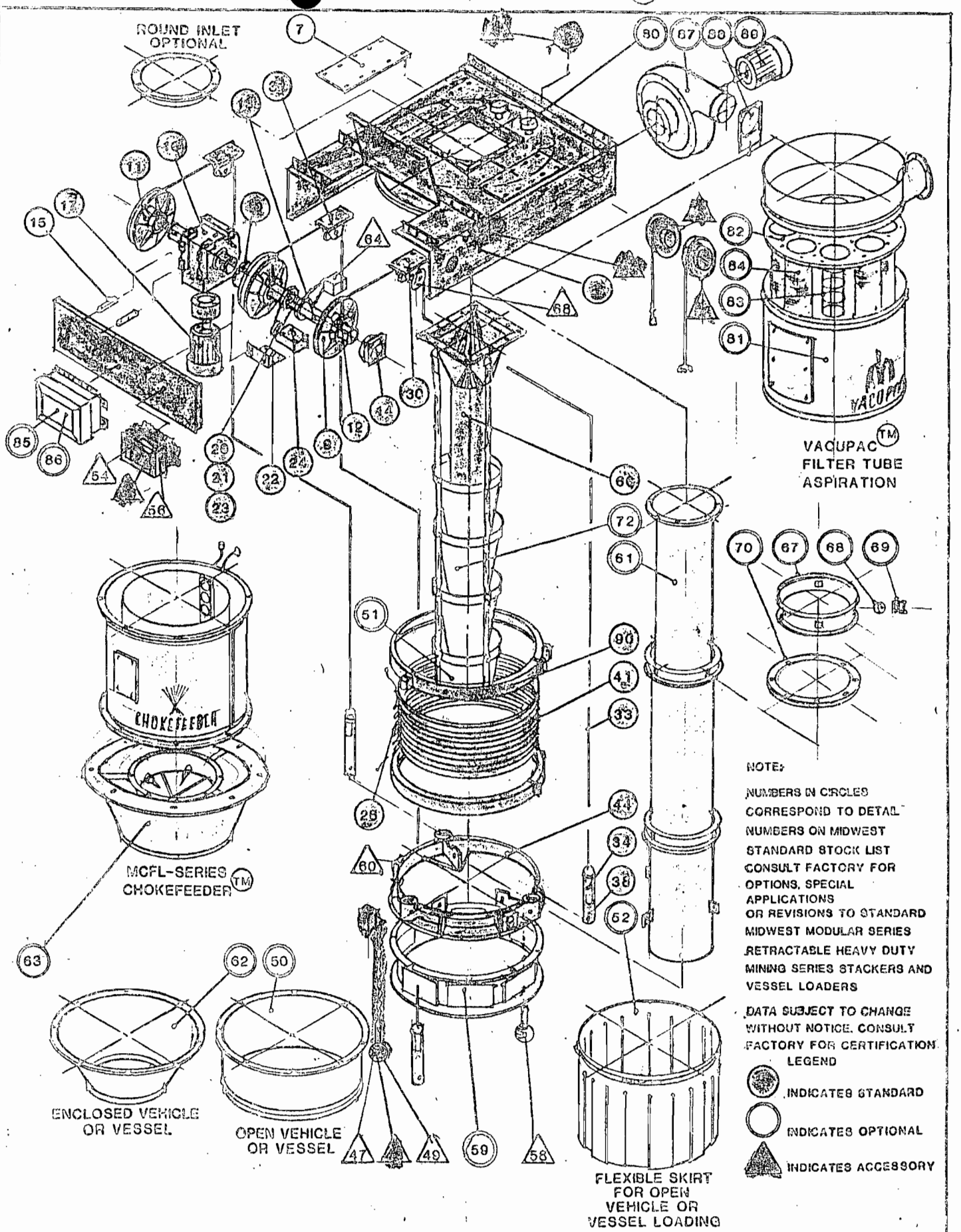
SHIP AND BARGE LOADER
CSX - TRANSPORTATION.
ROCKPORT - TAMPA, FLA.
PHOSPHATE HANDLING.
RE: SEMPO INC.

Midwest International
Environmental Equipment for Industry

Operational Headquarters
Midwest Plaza, 108 Stover Rd.
Charlevoix, Michigan 49720
Phone (616) 547-4073
Telex 23-1119
a division of
ron par enterprises, inc.

REF. 80-0852 3rd
SERIAL NO.
JOB NO. ROCKPORT CRS 0920A
SHEET NO. 4
DRAWING NO.
PREPARED FOR: JEFFBOARD
PO. NO.
TITLE:
SCALE:
DATE: 4 DEC 80
DRAWN: DATE: 10/29/82 CHECKED:

REVISION	DATE	NO



NOTE:

NUMBERS IN CIRCLES CORRESPOND TO DETAIL NUMBERS ON MIDWEST STANDARD STOCK LIST

CONSULT FACTORY FOR OPTIONS, SPECIAL APPLICATIONS OR REVISIONS TO STANDARD MIDWEST MODULAR SERIES RETRACTABLE HEAVY DUTY MINING SERIES STACKERS AND VESSEL LOADERS

DATA SUBJECT TO CHANGE WITHOUT NOTICE. CONSULT FACTORY FOR CERTIFICATION.

LEGEND

INDICATES STANDARD

INDICATES OPTIONAL

INDICATES ACCESSORY

Midwest International

EXPLODED VIEW

PREPARED FOR HEAVY DUTY MINING SERIES STACKERS, VEHICLE AND VESSEL LOADERS WITH FLEXIBLE OUTER SPOUT SERIES

DATE 12/3/86

ISSUE-07
12/3/86

TECHNICAL SPECIFICATIONS

MIDWEST
RETRACTABLE BULK LOADING AND STOCKPILING SPOUTS,

FLEXIBLE OUTER SPOUT SERIES
BASE UNITS WITH OPTIONS, ACCESSORIES AND MODULES

STANDARD

DETAIL	DESCRIPTION
1	- Pan, Main Assembly
7	- Plate Covers, Some Models
9	- Pulley Assy., Lift./Shaft
10	- Coupling
11	- Pulley Assy., Lift./Red.
12	- Clamp, Cable Assembly
13	- Shaft, Drive
14	- Bearing
15	- Spacer, Reducer Mtg., Some Models
16	- Reducer/Gear, Some Models
17	- Motor
20	- Chain & Sprocket Assy.
21	- Chain
22	- Bracket Assy., RLS Mounting
23	- Sprocket/Driven
24	- Switch, Limit, Rotating
26	- Line, Anti-Static
30	- Sheave Assy./(Front)
31	- Sheave Assy./(Rear)
33	- Cable Assembly
34	- Weight Assembly, Cable
38	- Tube Assy., Lifting
41	- Outer Spout Assembly
44	- Lifting Ring Assembly
66	- Venturi Assembly

OPTIONS

50	- OV/OS Open Vehicle/Vessel Outer Scavenger
51	- Inner Scavenger Assy., used with Retractable Venturi Cones Only
52	- Skirt, Flexible Rubber or Neoprene
59	- Product Relief Doors
61	- Rolling Telescoping Tubes
62	- EV Enclosed Vehicle Outer Scavenger
63	- Chokefeeder (TM). Refer to Drawing for Parts Detail Numbers
67	- Rolling Tube Collar
68	- Roller
69	- Roller Bracket
70	- Stop Ring
72	- Venturi Assy., Retractable
80	- Valve, Pilot Op. Diaphragm
81	- Filter Chamber Assembly
82	- Tube Sheet Assembly
83	- Cage
84	- Bag, Filter
85	- Encl., Controller
86	- Valve, Pilot
87	- Blower, Centrifugal
88	- Damper, Balancing
89	- Motor
90	- Ring, Splice, Roller

Optional Powered Trimmer - Not Shown
Optional Pivot Gimbal - Not Shown

OPTIONAL ACCESSORIES

47	- Probe, Level Sense
[illegible]	- Probe, Raising Kit
49	- Probe, Level Sensing Kit
[illegible]	- Slack Cable Limit Switch Kit
54	- Combination Auto Raise/ Level Sense Kit Controller Enclosure
[illegible]	- Automatic Raising Kit Controller Enclosure and/or Auto Lowering
56	- Level Sensing Kit, (Type A, B or C) Controller Enclosure
[illegible]	- Level Sense Type B, PD Switch
58	- Probe, Auto Lowering Kit
60	- Air Vibrator Kit
64	- Digital Readout
[illegible]	- Cord Reel
[illegible]	- Hose Reel