Check Sheet

Company Name: LIFETILE CORPORATION
Permit Number: AC 53-160942
PSD Number:
Permit Engineer:

Application:

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

Cross References:

- [ ]
- [ ]
- [ ]

Intent:

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

Correspondence with:

- [ ] EPA
- [ ] Park Services
- [ ] Other

- [x] Proof of Publication
  - [ ] Petitions - (Related to extensions, hearings, etc.)
  - [ ] Waiver of Department Action
  - [ ] Other

Final Determination:

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

Post Permit Correspondence:

- [ ] Extensions/Amendments/Modifications
- [ ] Other

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

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

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

3. Article Addressed to:

Mr. Dale Reeves
General Manager
Lifetile Corporation
P. O. Box 632
Lake Wales, Florida 33859

4. Article Number

P 052 482 237

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 Linda Fiske

6. Signature — Agent

X

7. Date of Delivery

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

APR 10 1990

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

P 052 482 237

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Dale Reeves, Lifetile Corp	
Street and No. P. O. Box 632	
P.O., State and ZIP Code Lake Wales, FL 33859	
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: 4-5-90 Permit: AC 53-169743	

PS Form 3800, June 1985

Florida Department of Environmental Regulation

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

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

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Dale Reeves
General Manager
Lifetile Corporation
P. O. Box 632
Lake Wales, Florida 33859

April 4, 1990

Enclosed is construction permit No. AC 53-169743 to construct a white cement storage silo and baghouse at your facility in Lake Wales, Polk County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

B. Thomas, SW District
R. Baker, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 4-5-90.

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

Kim Tober 4-5-90

Clerk Date

Final Determination

Lifetile Corporation
Lake Wales, Polk County, Florida

White Cement Storage Silo
Permit No. AC 53-169743

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

April 2, 1990

Final Determination

The construction permit application has been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in The Ledger on February 28, 1990. The Technical Evaluation and Preliminary Determination were available for public inspection at the Department's Southwest District office in Tampa and the Bureau of Air Regulation in Tallahassee.

No comments were received during the public notice period. Therefore, the final action of the Department will be to issue the construction permit as drafted.

Florida Department of Environmental Regulation

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

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

PERMITTEE:
Lifetile Corp.
P. O. Box 632
Lake Wales, FL 33859-0632

Permit Number: AC 53-169743
Expiration Date: 12/31/90
County: Polk
Latitude/Longitude: 27°53'47"N 81°30'20"W
Project: White Cement Storage Silo

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

For the construction of a white cement storage silo and baghouse at the permittee's Lake Wales facility in Polk County, Florida. The UTM coordinates are Zone 17, 450.2 km E and 3085.6 km N.

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

Attachments are listed below:

1. Application to Construct Air Pollution Sources, DER form 17-1.202(1) received September 7, 1989.

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

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

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

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The construction and operation of this source shall be in accordance with the capacities and specifications stated in the application.

2. The white cement storage silo shall be allowed to operate at a maximum rate of 26 tons per hour for up to 156 hours per year. Non-white cement usage at the facility shall be reduced by an identical amount so there is no increase in material processed.

3. Visible emissions from the baghouse for this source shall not be greater than 5% opacity and compliance shall be demonstrated at 90-100% of permitted capacity using DER Method 9 in accordance with F.A.C. Rule 17-2.700.

4. The compliance test shall be conducted within 30 days after operation begins and the results reported to the Department's Southwest District office before this construction permit expires. The district office shall be notified at least 15 days in advance of the test and at least 5 days prior to the plant being placed in operation.

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

PERMITTEE:
Lifetile Corp.

Permit Number: AC 53-169743
Expiration Date: Dec. 31, 1990

SPECIFIC CONDITIONS:

6. An application for an operation permit must be submitted to the DER's Southwest office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 4th day
of April, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____

To: _____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

Interoffice Memorandum

TO: Steve Smallwood

FROM: for Clair Fancy JKP

DATE: April 2, 1990

SUBJ: Approval of Construction Permit No. AC 53-169743
Lifetile Corporation

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a white cement storage silo and baghouse at their facility in Lake Wales, Polk County, Florida.

No comments were received during the public notice period.

Day 90, after which this permit will be issued by default, is April 11, 1990.

I recommend your approval and signature.

CF/JR/plm

Attachments

LIFETILE®

BORAL CONCRETE PRODUCTS INC.

P.O. Box 632 • 200 Story Road
Lake Wales, Florida 33859-0632
813/676-9405 • Telecopier: 813/676-5171

March 13, 1990

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL. 32399-2400

ATT: C.H. Fancy

RE: DER File No. AC 53-169743

Dear Mr. Fancy,

Enclosed is a notarized copy of our advertisement publishing the required Notice of Intent to Issue relative to permitting a white cement silo in Lake Wales.

Fred Else
Manufacturing Manager

FE/lm

cc: B. Thomas - Bureau of Air Regulation
B. Baker - Baker Environmental Engineering, Inc.
B. Thomas - S.W. Dist
G. Reynolds

LIFETILE®
Fire-Safe Concrete Rooftile

BORAL CONCRETE PRODUCTS, Inc.
P.O. Box 632
200 Story Road
Lake Wales, FL 33859-0632

LAKE WALES MAR 14 90 FLA.

U.S.POSTAGE 0.25 POSTALIA METER 95G156

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL. 32399-2400

Mr. C.H. Fancy

AFFIDAVIT OF PUBLICATION

THE LEDGER

Lakeland, Polk County, Florida

Case No .....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Stephen DeWitt, who on oath says that he is Controller of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a .....

Notice of Intent

.....

.....

in the matter of .....

Silo

.....

.....

in the .....

.....

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

February 28; 1990

.....

.....

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

Signed ..... Stephen P. DeWitt
Controller

Sworn to and subscribed before me this 28th day of February A.D. 19 90

(Seal)

Barbara Thrasher
Notary Public

My Commission Expires NOTARY PUBLIC, STATE OF FLORIDA. MY COMMISSION EXPIRES: NOV. 11, 1990. BONDED THRU NOTARY PUBLIC UNDERWRITERS.

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Lifetile Corporation, P.O. Box 362, Lake Wales, Florida 33859 to construct a white cement storage silo and baghouse at their facility on Stary Road in Lake Wales, Polk County, Florida. A determination of Best Available Control Technology (BACT) was not required. The department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

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

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

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

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

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

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

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

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

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Southwest District
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.

K-884 2-28;1990

AFFIDAVIT OF PUBLICATION

THE LEDGER
Lakeland, Polk County, Florida

Case No.....

RECEIVED
FEB 12 1990
DER - BAQM

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Stephen DeWitt, who on oath says that he is Controller of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a .....

Intent of Issue

in the matter of .....

Storage Silo

in the .....

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

January 26, 1990

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

Signed ..... Controller

Stephen DeWitt

Sworn to and subscribed before me this 29th day of January A.D. 19 90

(Seal)

Barbara Thigpen
Notary Public

NOTARY PUBLIC, STATE OF FLORIDA
MY COMMISSION EXPIRES: NOV. 11, 1990
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

My Commission Expires .....

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
DER File No. AC 53-169743
In the Matter of
Application for Permit by:
Lifetile Corporation
P. O. Box 632
Lake Wales, FL 33859

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, Lifetile Corporation, applied on September 7, 1989, to the Department of Environmental Regulation for a permit to construct a white cement storage silo and baghouse at their facility in Lake Wales, Polk County, Florida.

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

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

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

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

The Petition shall contain the following information;

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

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

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

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

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

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION
/s/ C. H. Fancy
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

Copies furnished to:
B. Thomas, SW District
R. Baker, P.E.

K-807 — 1-26; 1990

LIFETILE®

BORAL CONCRETE PRODUCTS INC.

P.O. Box 632 • 200 Story Road
Lake Wales, Florida 33859-0632
813/676-9405 • Telecopier: 813/676-5171

February 7, 1990

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL. 32399-2400

ATT: C.H. Fancy, P.E.

RE: DER File No. AC 53-169743

Dear Mr. Fancy:

Enclosed is a notarized copy of our advertisement in accordance with regulations relating to the permit for our white cement silo at Lake Wales.

Sincerely,

LIFETILE

Fred Else
Manufacturing Manager

FE/lm

cc: B. Thomas - Bureau of Air Regulation
R. Baker - Baker Environmental Engineering, Inc.
D. Reeves

Called Bob Baker 2/13/90 - He will have company publish "Notice of Intent" PA

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. Dale Reeves
General Manager
Lifetile Corp.
P. O- Box 632
Lake Wales, FL 33859

4. Article Number

P 938 762 808

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 D. McDonald.

7. Date of Delivery

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

LAKE WALES, FL 33853 JAN 19 1990

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

P 938 762 808

RECEIPT FOR CERTIFIED MAIL

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

Sent to Mr. Dale Reeves, Lifetile Corp.	
Street and No. P.O. Box 632	
P.O., State and ZIP Code Lake Wales, FL 33859	
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: 1-17-90 Permit: AC 53-169743	

PS Form 3800, June 1985

Florida Department of Environmental Regulation

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

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

January 12, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dale Reeves
General Manager
Lifetile Corporation
P. O. Box 632
Lake Wales, FL 33859

Dear Mr. Reeves:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Lifetile Corporation to construct a white cement storage silo and baghouse at their facility in Lake Wales, Florida.

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

Sincerely,

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

CHF/kt

Attachments

cc: B. Thomas, SW District
R. Baker, P.E.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Lifetile Corporation
P. O. Box 632
Lake Wales, FL 33859

DER File No. AC 53-169743

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, Lifetile Corporation, applied on September 7, 1989, to the Department of Environmental Regulation for a permit to construct a white cement storage silo and baghouse at their facility in Lake Wales, Polk County, Florida.

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

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

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

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

The Petition shall contain the following information;

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

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

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

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

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

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

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

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

B. Thomas, SW District
R. Baker, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 1-17-90.

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

Kim Doben 1-17-90
Clerk Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Lifetile Corporation, P.O. Box 362, Lake Wales, Florida 33859 to construct a white cement storage silo and baghouse at their facility on Story Road in Lake Wales, Polk County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

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

The Petition shall contain the following information;

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the

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

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

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

Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

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

Technical Evaluation
and
Preliminary Determination

Lifetile Corporation
Lake Wales, Polk County, Florida

White Cement Storage Silo
Permit No. AC 53-169743

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

January 12, 1990

I. Application

A. Applicant

Lifetile Corporation
P. O. Box 632
Lake Wales, Florida 33859

B. Request

The Department received an application on September 7, 1989, for a permit to install a new white cement storage silo and baghouse at the applicant's facility in Lake Wales, Florida. After receiving additional information on November 2, 1989, the application was deemed complete.

C. Location/Classification

The applicant's cement tile manufacturing facility (SIC Code 3272) is located off Story Road in Lake Wales. Latitude is 27° 53' 47"N while longitude is 81° 30' 20"W. The UTM coordinates of the site are: Zone 17, 450.2 km E and 3085.6 km N.

II. Process Description/Emissions

It is proposed to install a 100-ton white cement storage silo to replace an equal amount of gray cement presently being used in the tile manufacturing plant. The new silo will be vented to a new baghouse mounted on the silo. Cement dust recovered by the baghouse will be returned to the silo by gravity. There will be no increase in emissions since the total material usage will remain the same as before. The new silo loading system will be capable of loading 26 tons per hour. Maximum operation time will be 156 hours per year.

III. Rule Applicability

The construction permit application is subject to review under Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4. The facility is located in an area classified as attainment for each of the regulated air pollutants. F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, applies to this installation. The general particulate and visible emission limiting standards set forth in F.A.C. Rule 17-2.610 would apply except that, where a baghouse is installed, actual emissions are substantially below the process weight table limits. Rather than applying these limits and requiring a Method 5 compliance test, an alternative standard of 5% opacity will be specified in the permit in accordance with F.A.C. Rule 17-2.700(3)(d).

V. Conclusion

Based on the information provided by Lifetile Corporation, the Department has reasonable assurance that the proposed project as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

Florida Department of Environmental Regulation

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

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

PERMITTEE:
Lifetile Corp.
P. O. Box 632
Lake Wales, FL 33859-0632

Permit Number: AC 53-169743
Expiration Date: 12/31/90
County: Polk
Latitude/Longitude: 27°53'47"N
81°30'20"W
Project: White Cement Storage Silo

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

For the construction of a white cement storage silo and baghouse at the permittee's Lake Wales facility in Polk County, Florida. The UTM coordinates are Zone 17, 450.2 km E and 3085.6 km N.

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

Attachments are listed below:

1. Application to Construct Air Pollution Sources, DER form 17-1.202(1) received September 7, 1989.

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

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

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

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The construction and operation of this source shall be in accordance with the capacities and specifications stated in the application.

2. The white cement storage silo shall be allowed to operate at a maximum rate of 26 tons per hour for up to 156 hours per year. Non-white cement usage at the facility shall be reduced by an identical amount so there is no increase in material processed.

3. Visible emissions from the baghouse for this source shall not be greater than 5% opacity and compliance shall be demonstrated at 90-100% of permitted capacity using DER Method 9 in accordance with F.A.C. Rule 17-2.700.

4. The compliance test shall be conducted within 30 days after operation begins and the results reported to the Department's Southwest District office before this construction permit expires. The district office shall be notified at least 15 days in advance of the test and at least 5 days prior to the plant being placed in operation.

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

PERMITTEE:
Lifetile Corp.

Permit Number: AC 53-169743
Expiration Date: Dec. 31, 1990

SPECIFIC CONDITIONS:

6. An application for an operation permit must be submitted to the DER's Southwest office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

Florida Department of Environmental Regulation

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

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary
Dr. Richard Garrity, Deputy Assistant Secretary

September 26, 1989

RECEIVED
NOV 13 1989
DER - BAQM

Mr. Dale Reeves
General Manager
Boral Concrete Products, Inc.
d/b/a Lifetile Corportion
Post Office Box 632
Lake Wales, Florida 33859

Dear Mr. Reeves:

Re: Polk County - AP
Construction Permit
AC53-169742
White Cement Storage Silo

An application for the construction of the white cement storage silo was received at the Southwest District office on September 7, 1989.

Since this construction is at a major facility, the application should have been sent to our Tallahassee office for processing.

In Attachment 3, the project discription states that the vendor of the baghouse has not been chosen yet. Once the vendor has been chosen the design drawings and other technical information including the manufacturer's guarantee must be supplied. This information along with any other information needed to process the application should be sent to Mr. Bill A. Thomas, P.E. at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400 since the application has been forwarded.

Should you have any questions please direct them to the Tallahassee office of the Bureau of Air Quality Management, Central Air Permitting Section.

Sincerely,

J. Harry Kerns

J. Harry Kerns, P.E.
District Air Engineer
Southwest District

cc: Bill A. Thomas, P.E., Tallahassee
Robert A. Barker, P.E., K & A

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Patty ADAMS	Initial / Date
2. BAQM CAPS	Initial / Date
3. TT 306 H	Initial / Date
4.	Initial / Date

R

REMARKS:

Incompleteness Letter
For Lifetime
AC 53-169742

RECEIVED
NOV 13 1989
DER - BAQM

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: Geo Richardson TPA

DATE

PHONE SC 552-7612

BAKER
ENVIRONMENTAL ENGINEERING, INC.
6821 SW Archer Road
Gainesville, FL 32608
(904) 371-9451
(904) 378-1500 FAX

November 1, 1989
B-2320

Mr. John Reynolds
Fl. Dept. of Env. Reg.
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Polk County - AP
Construction Permit
AC53-169742
White Cement Storage Silo

Dear John:

Per your telephone conversation with Bob Baker on October 18, 1989, I am enclosing the Baghouse description and Vendor information to be included in Attachment 3 of the above referenced permit application. The small baghouse for this silo is a DCE Unimaster, type UMA458V, serial number 83-1327, manufactured by DCE located at 1301 Electron Drive, Jeffersontown, KY. 40239.

Please let me know you have any questions.

Sincerely,

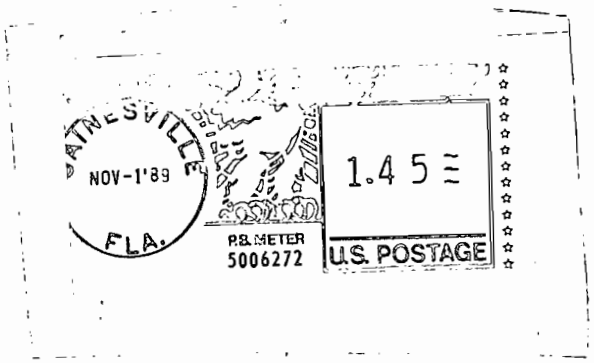
BAKER ENVIRONMENTAL ENGINEERING, INC.

Pamela T. Dickinson

PTD/ljc

cc Mr. Dale Reeves: Lifetile Corp.
Mr. Gordon Dennis: P.O. Box 632
Lake Wales, FL 33859

Mr. George Richardson: Florida Dept. of Env. Reg.
Southwest Division
4520 Oak Fair Blvd.
Tampa, FL 33610



Baker Environmental Engineering, Inc.
6821 S.W. Archer Road
Gainesville, Florida 32608

RECEIVED
NOV 2 1989
DER - BAQM

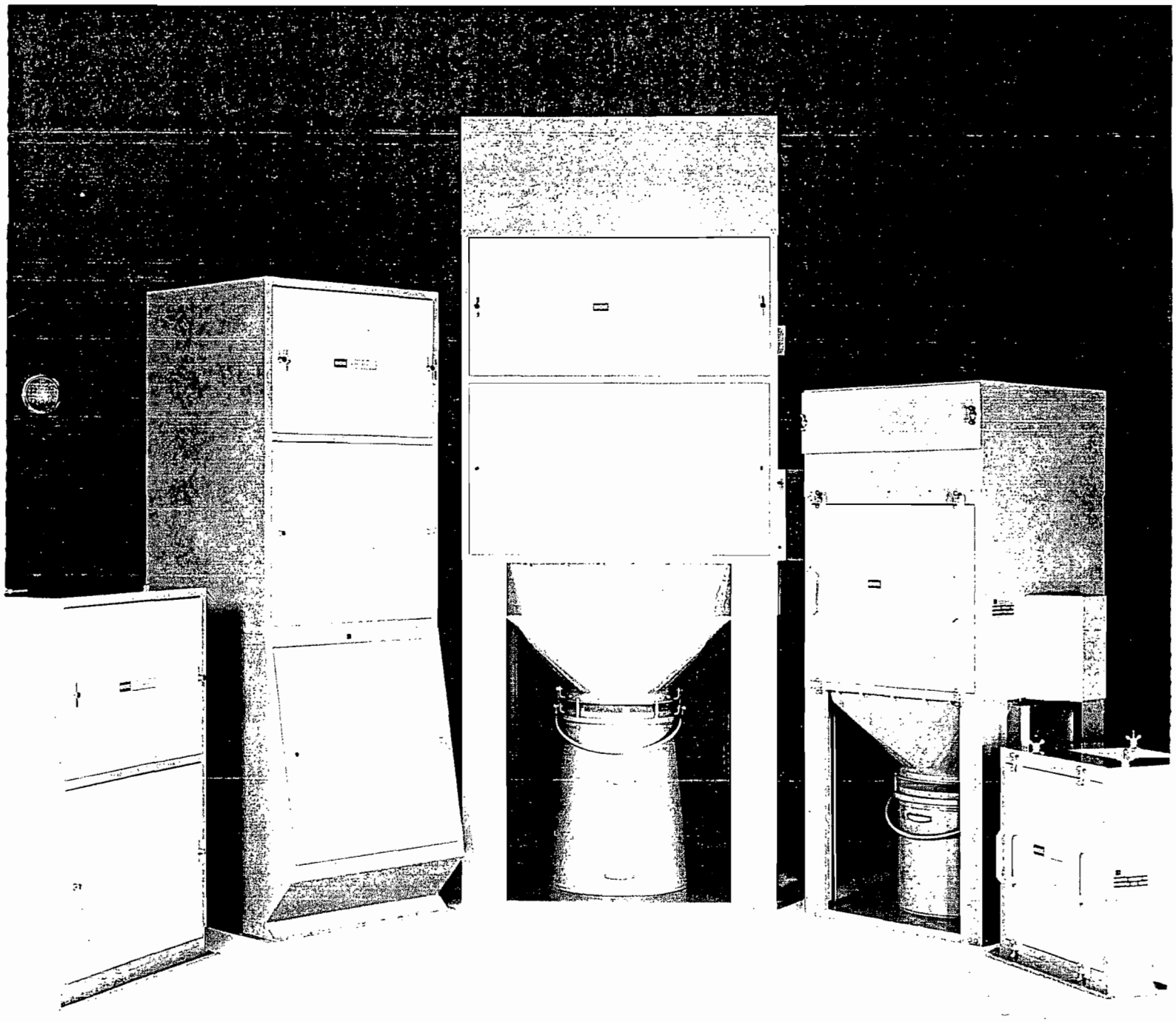
Mr. John Reynolds
Fl. Dept. of Env. Reg.
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399

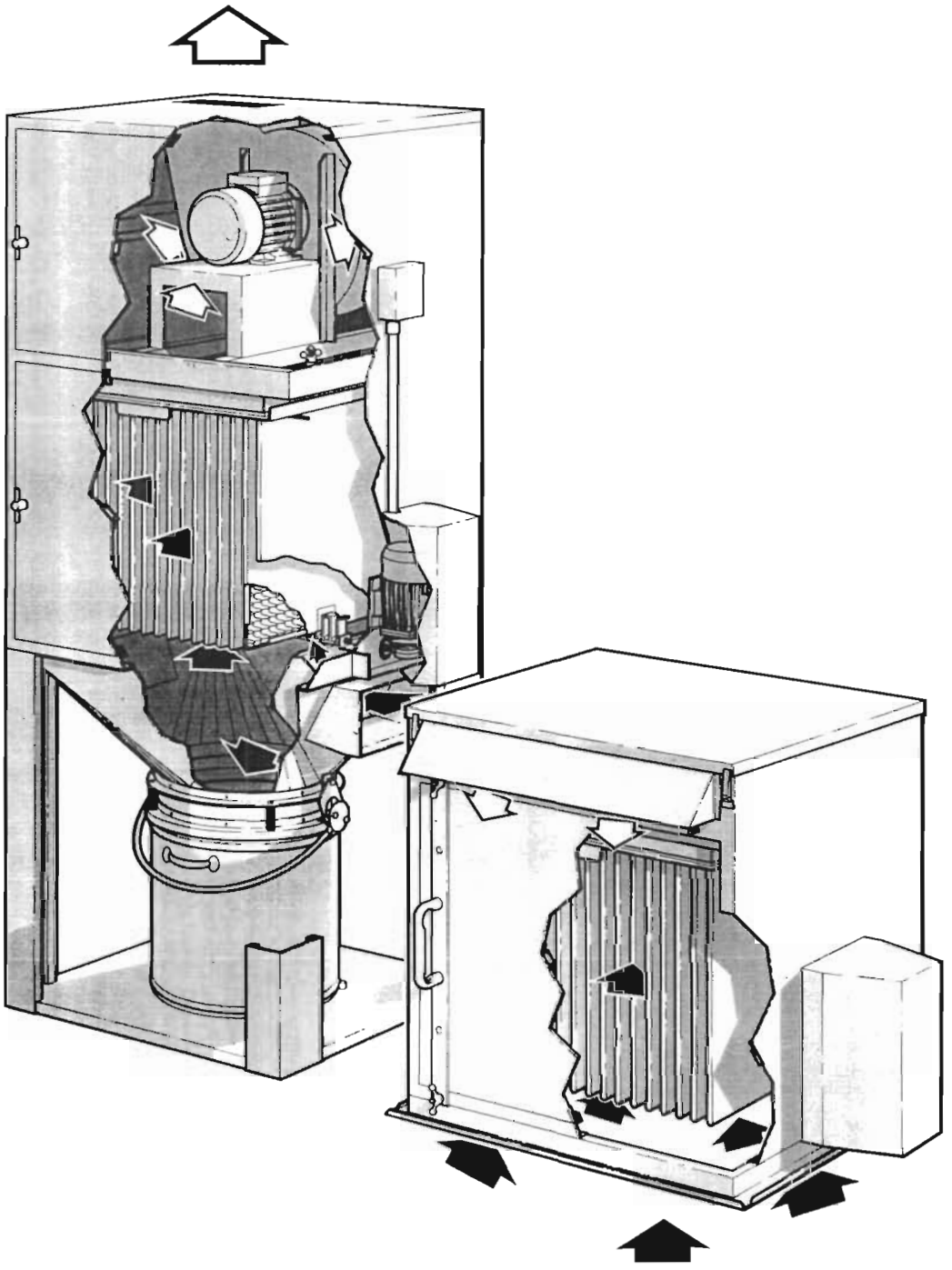
PUBLICATION 378B (USA)

DCE

Unimaster®

dust control units
series UMA70-250





Unimaster models UMA 152 and UMA 150V showing air flow

THE UNIMASTER

THE DCE UNIMASTER range of dust control units provides economical and effective solutions to a wide variety of dust problems throughout industry. The Unimaster has five basic constructions, a standard range of fan sizes, four filtration areas, two dust container capacities and a number of accessories. Assembled in different combinations these give a choice of over 500 Unimasters.

FEATURES OF THE DCE UNIMASTER

- **Multi-pad filter assembly** provides maximum fabric area for minimum floor space.
- **High quality filter fabric,** stringently tested, is made up into a one-piece multiple filter bag to minimize number of seals between fabric and frame.
- **Flat, parallel, rectangular pads** each have a flexible wire mesh insert to ensure maximum effective use of fabric area and to transmit the vibratory action of the cleaning mechanism to all parts of the pad.
- **Wide, flush-fitting front panels** lift off to give full access to fan and filter chambers.
- **No tools needed** for the slide-out filter assembly, which is supported on two runners and retained by four captive wingnuts. These ensure an airtight seal.
- **Front withdrawal** reduces headroom requirements (particularly important for venting units).
- **Motorized filter cleaner** is automatically activated every time the fan is switched off.
- **Fully electronic controller** incorporating important safety features ensures efficiency of the unit is maintained without dependence on the operator.
- **A choice of three inlet positions** allows for convenient location of Unimaster relative to dust source and best use of available space.
- **Two sizes of dust container** are available, of sensible size and easily handled.
- **Quick-release sealer gear** provides an airtight seal between hopper and dust container.
- **Optional safety features** include secondary filters, explosion relief panels and explosion proof motors.
- **After-sales facilities** include a full range of installation, operation and maintenance instructions with a ready supply of replacement parts should they be needed.

CONTENTS

TEXT

3 Introduction
Features

4 The Unimaster range &
five basic constructions

5 Applications
Operation

6 Controllers
Specifications

7 Accessories
Maintenance

TECHNICAL DATA

8 Standard Units, Type UMA

9 Hopper Type Units, Type UMA H
Sack Tipping Units, Type UMA STU

10 Venting Units, Type UMA V

11 Acoustic diffusers; Secondary filters;
Explosion relief panels; Weather cowls

12 Fan details
Sound pressure levels

13 Aperture and mounting details
Cleaned air outlet details

PHOTOGRAPHS

14 Production — fabric elements; components

15 Production — painting; finishing; despatch

16 Applications: Standard Unimasters, with and without accessories

17 Applications: Standard units; explosion relief; Hopper-type units

18 Applications: Sack-Tipping; Venting units with and without dust containers

19 Unit Collectors or a Central System

THE UNIMASTER RANGE

TYPES

Standard unit, Type UMA Standard integral dust control unit complete with fan, easy-access filter assembly, triple-inlet hopper, and dust container with quick-release sealer gear.

Hopper version, Type UMA H Dust control unit with fan and filter assembly only. The base is flanged and can be bolted directly onto a purpose-made dust container.

Sack Tipping Unit, Type UMA STU Dust control unit with fan, filter assembly, material discharge hopper and quick-release hatch for use in sack tipping operations.

Venting unit, Type UMA V Filter assembly only, in flanged case, specifically designed for ventilating silos and other storage vessels or process machinery, which are under pressure.

Venting unit with dust container The Type UMA V may be supplied with hopper and dust container if it is necessary to site the unit away from the equipment served.

SIZES

Fabric area Units are available in four different sizes based on fabric filtration areas as follows:

Size Designation	Approximate Filter Fabric Area	Availability
UMA 40*	40 ft²	Standard and 'H' Types
UMA 70	70 ft²	All Types except STU
UMA 100	100 ft²	All Types
UMA 150	150 ft²	All Types
UMA 250	250 ft²	All Types
UMA 450†	450 ft²	All Types except STU

Dust containers Easily accessible 2 cu.ft. or 4 cu.ft. containers are supplied with standard units and with certain venting units.

Fans Standard and hopper type units are normally fitted with one of four fan sizes as shown below. Unit performance curves and a fan selection procedure are given on page 12. Fans of higher capacity are available for special applications.

Size Designation	Designations and Motor Ratings of Fans available*			
UMA 70	G1 (1 hp)	–	–	–
UMA 100	G1 (1 hp)	G3 (3 hp)	–	–
UMA 150	–	G3 (3 hp)	G5 (4 hp)	–
UMA 250	–	G3 (3 hp)	G5 (4 hp)	G8 (7·5 hp)

*Note: All Sack Tipping Units have a G3 fan with modified outlet.

Unit designations The following sequence of letters and figures is used to designate all Unimasters:

UMA = Unimaster, 'A' Series.

70, 100, 150 or 250 = filter size. The final digit changes to 2 or 4 if a dust container is fitted.

H, STU or V = Type (if other than standard).

G1, G3, G5 or G8 = fan size.

Examples are given below:

Typical Unit Designations	Unit Type	Approx. Fabric Area	Dust Containers	Fan
UMA 254 G5	Standard	250 ft.²	4 cu.ft.	G5
UMA 70H G1	Hopper	70 ft.²	–	G1
UMA 100STU	Sack Tipping	100 ft.²	–	G3
UMA 150V	Venting	150 ft.²	–	–
UMA 252V	Venting	250 ft.²	2 cu.ft.	–

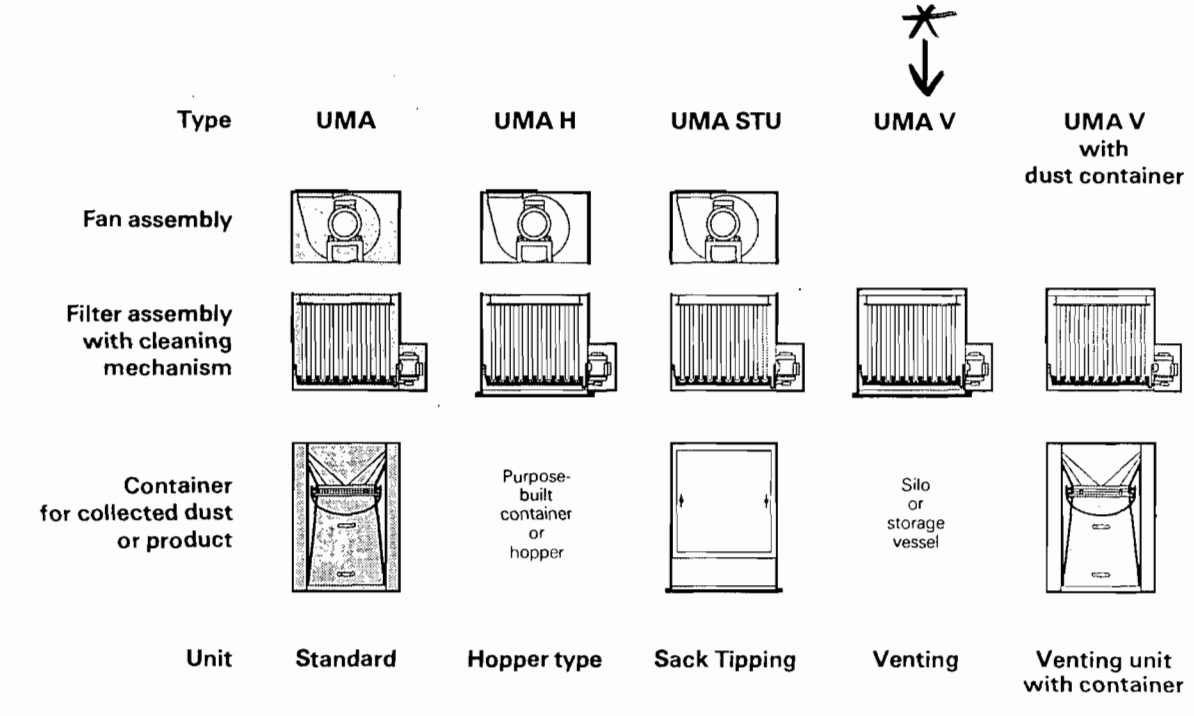


Fig. 1 Unimaster dust control units—the five basic constructions

* The UMA 40 standard unit features a pull-out dust drawer. Details of both versions are given in Publication 379.

†The UMA 450 standard unit has two quick-release dust containers. For full details of the range see Publication 380

APPLICATIONS

Standard units

DCE Unimaster Type UMA dust control units are applied in most industries on many different dusts involving a wide variety of processes. A comprehensive list of applications would be too long and misleading because each problem needs careful assessment before the most suitable unit can be selected. As a general guide applications include the following types of dust generating machinery: borers, chipping booths, crushers, drills, grinders, lathes, milling machines, mixers, packing machines, polishers, powder spray equipment, presses, sanders, saws, shot-blast cabinets, slitters, tabletting machines.

Hopper type units

The type UMA H is designed for applications requiring increased dust storage capacity, typically for dusts with a large bulk, e.g. sawdust and shavings from saw benches and planers. It can also be applied to groups of several machines, on intermittent use of large machines, or on any other heavy duty requirements needing large container capacity. Further applications include the ventilation of bulk storage vessels and process machinery under negative pressure.

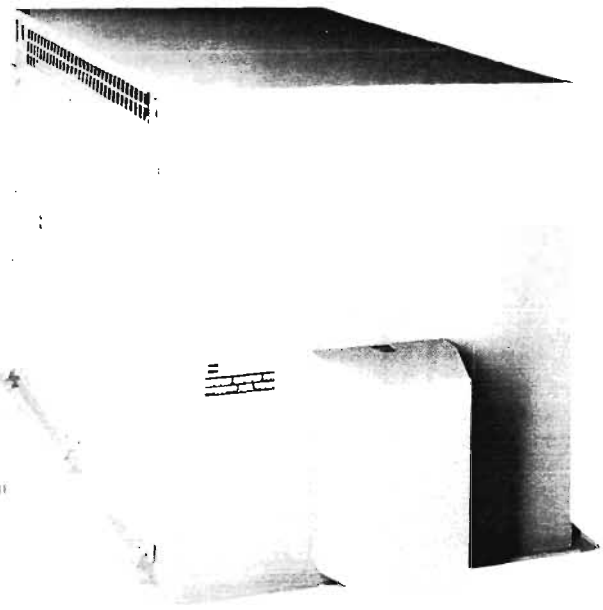
Sack tipping units

The UMA STU is specifically designed for use in tipping operations. The unit is easy to locate over feeding points to hoppers, chutes and conveyors, where material is manually discharged from sacks or containers.

Venting units

The venting units Type UMA V are designed for ventilating process machinery, silos or other storage vessels, which are under pressure. The size of the unit required is determined by the period of uninterrupted operation, the air displacement of the system and the approved filtration velocity.

If the unit needs to be located away from the silo or process served, a UMA V with hopper and dust container is used.



Latest design of Unimaster Venting Unit – showing cleaned air outlet at front, and sloping lid.

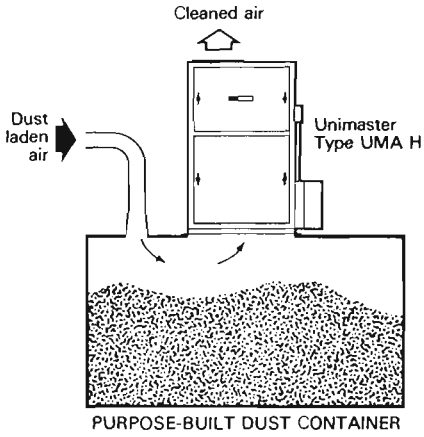


Fig.2 Unimaster hopper type unit

OPERATION

Standard unit

As shown inside front cover, contaminated air from the dust generation point is drawn through the inlet to the filter by the fan. Initially some pre-separation takes place in the unit hopper where a baffle deflects the heavier dust particles into the dust container below. Finer dust particles are carried up to the filter elements where they are retained on the outer surface of the filter fabric. The cleaned air passes through the filter fabric into the fan chamber and is then discharged. On fan shutdown the cleaning mechanism is automatically activated. The collected dust is dislodged from the filter elements and falls into the container below. On normal applications the optimum interval between cleaning cycles should be four hours.

Hopper type unit

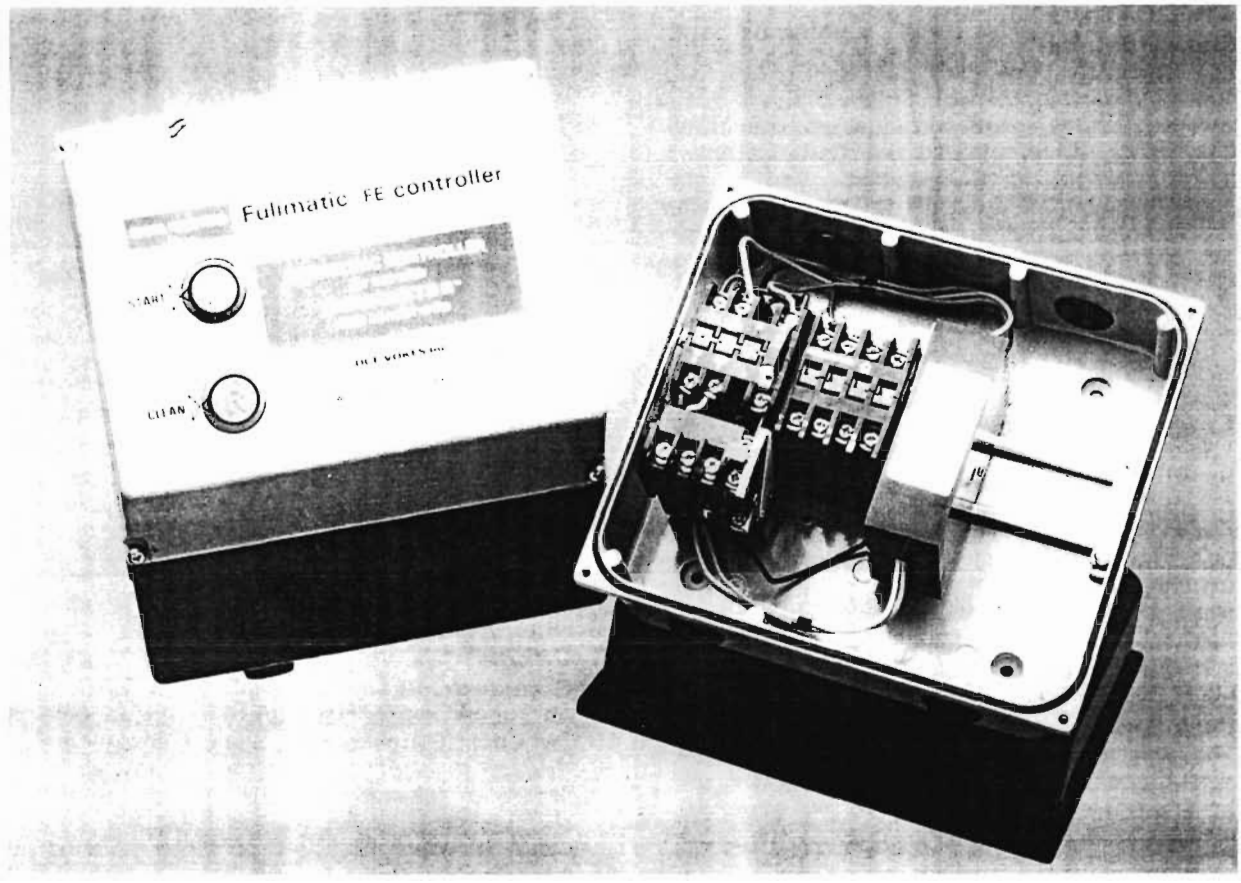
Operates as Standard unit, dust being entrained as shown in Fig. 2.

Sack tipping unit

The quick-release hatch is removed from the hopper and the unit fan is switched on. Air is entrained through the sack tipping point and prevents dust escaping while sacks are being emptied. Airborne dust is carried up and retained by the filter elements. On completion of sack tipping the hatch is replaced and the fan switched off, which automatically activates the filter cleaning mechanism – depositing the collected dust directly into the hopper, chute or conveyor beneath.

Venting unit

The Venting unit filter operates above atmospheric pressure. No fan is supplied, the air flow being provided by the blower or fan associated with the system (see inside front cover). The conveying air and feed burden should enter the silo, bin or pressure vessel in a way that allows pre-separation of the bulk product from the conveying air before it reaches the filter. Dust is collected in the same way as in the Standard unit. On completion of delivery, the blower or fan must be allowed to run down before the cleaning mechanism is operated. Collected dust is deposited directly into the silo or dust container.



CONTROLLERS

The Fulimatic FE controller

An electronic controller as shown above is supplied with all Standard, H- and STU-type Unimasters. It is a dual direct-on-line starter, which governs (a) unit operation and (b) automatic cleaning of the filter elements each time the fan is shut down to ensure that filtration efficiency is properly maintained without dependence on the operator.

The START button operates the fan motor. The CLEAN button switches off the fan motor and starts the cleaning cycle. The controller allows the fan to run down and then activates the cleaner motor for about 35 seconds. To protect the filter elements the motors are interlocked by the controller to prevent simultaneous operation. Following a power failure the controller automatically resets the timer cycle so that the Unimaster can only be operated again by pressing the START button. Overload protection is provided for the fan motor.

The controller components are housed in a metal die-cast box which is finished in a tough epoxy powder paint. In most cases, the contactors and timer are DIN rail mounted for ease of maintenance and inspection. To ensure a dust-proof seal, the top cover is held tight by four screws against a recessed sealing ring in the box. The controller is available for most electrical supply voltages and fan motors up to 7·5 hp.

The venting unit VE controller

This consists of a direct-on-line contactor and electronic timer with a single push button (CLEAN) which must be pressed down until the cleaning mechanism comes into operation. The controller must only be operated under static air conditions.

SPECIFICATIONS

Electric motors

Two motors are supplied, one for the fan and one for the cleaning mechanism, both being suitable for direct-on-line starting. Standard fan motors vary in size from 1 hp to 7·5 hp. They are totally enclosed, and run at 3450 rpm. The cleaner motor runs at 1150 rpm and, being intermittently used, is rated at ¼ hp. Except when explosion proof motors are supplied, units incorporating a fan require no internal connections since both fan and cleaner motor are wired to an external terminal box for connecting to the Fulimatic controller. Venting units require field connections from the cleaner motor terminal block to the controller.

Filter materials

For the majority of applications a satin weave cotton cloth is used, giving high filtration efficiency with low pressure drop. For dusts with acidic or alkaline properties, polypropylene and other synthetic fibres are available. All selected synthetics are abrasion resistant, inert and free from mildew reaction. Other weaves and fabrics are available where special considerations apply. All fabrics undergo stringent quality control tests.

Paint finish

The Unimaster assembly line includes two stages of paint application. All piece parts and welded subassemblies are degreased and receive a prime coat of paint. After assembly the complete unit is given a final coat of paint which is adequate for most applications. The standard color, with the doors a lighter shade, results in an attractive unit.

ACCESSORIES*

Acoustic diffuser The Unimaster can be fitted with an acoustic diffuser capable of reducing noise levels to well below 75 dB(A) at one meter from the unit. Contained in a housing on top of the unit, the diffuser is lined with special absorptive foam and deflects the exhausted air from the fan outlet through four 90° angles. No acoustic diffuser is needed when a secondary filter is fitted.

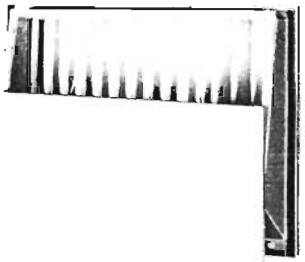
Secondary filter A secondary filter as illustrated below can be fitted to Unimasters where the quality of recirculated air is extremely critical. It also acts as a fail-safe device if the main unit filter element gets damaged. With certain dust the filtered air must never be recirculated. If in doubt refer to DCE or the appropriate health and safety authorities.

UMA 250 secondary filter

Each filter panel is inserted through the front access door of a housing mounted on top of the unit and sealed tightly into position by four nuts.

Weather cowls All venting units now have a sloping lid, secured by four toggle fasteners. A simple weather cowl is available for mounting over the cleaned air outlet, see inside front cover, and Figure 11 on page 11. A hinged weather cowl is available for fan type units. (Details on request.)

Explosion relief

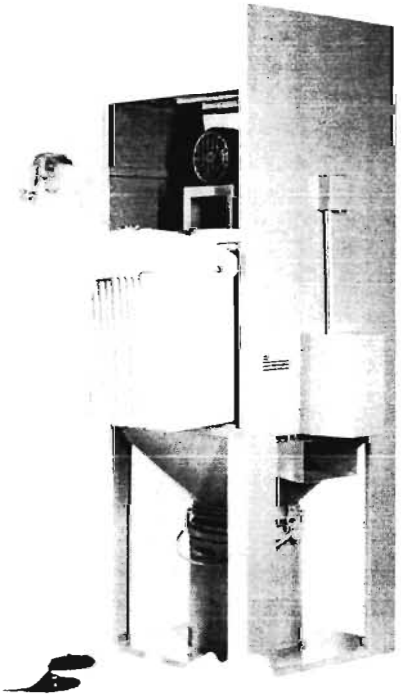


Most carbonaceous dusts, plastics, fertilizers, pharmaceuticals, fossil fuels, chemicals, foodstuffs and certain metallic dusts, present an explosion hazard for which explosion relief panels must be fitted. The National Fire Protection Association guide for explosion venting contains a list of tested dusts and their explosion characteristics.

The Unimaster explosion relief panel is fitted on the *back* of the unit, adjacent to the filter assembly. This position on the dirty side and close to the most likely source of ignition reduces the risk of serious damage to the unit. The front access doors of units fitted with explosion relief panels are doubly secured with additional stiffeners and fasteners.

Ideally, units fitted with explosion panels should be located outside. If sited indoors it is recommended that explosion panels be relieved to a safe area, using ducting with sufficient strength to withstand the explosive pressure. The relief duct should normally be as short as possible, not exceeding three meters, with no directional changes.

The Unimaster explosion relief panel is held in place by a non-corroding magnetic strip. In an explosion, two wire ropes prevent it becoming detached from the unit as illustrated above. DCE does not regard hinges as satisfactory.



Preparing to change the filter on a Unimaster

MAINTENANCE

DCE is anxious that its equipment should function properly at all times and maintenance instructions accompany every unit.

Although Unimaster dust control units are expected to give a long and trouble-free life, it is recommended that they are inspected at least every six months.

Like any other equipment, the unit will remain at peak performance if it is regularly checked and properly maintained.

The Unimaster has been deliberately designed to ensure easy maintenance and no tools are needed either for unit inspection or filter replacement. Full width doors with quick-release catches give prompt access to both filter and fan chambers while the whole filter assembly can be slid out of the unit after simply loosening the four captive wingnuts.

*Dimensions and weights of accessories are given on page 11. For details of dust containers see foot of page 8

Venting Units, Type UMA V

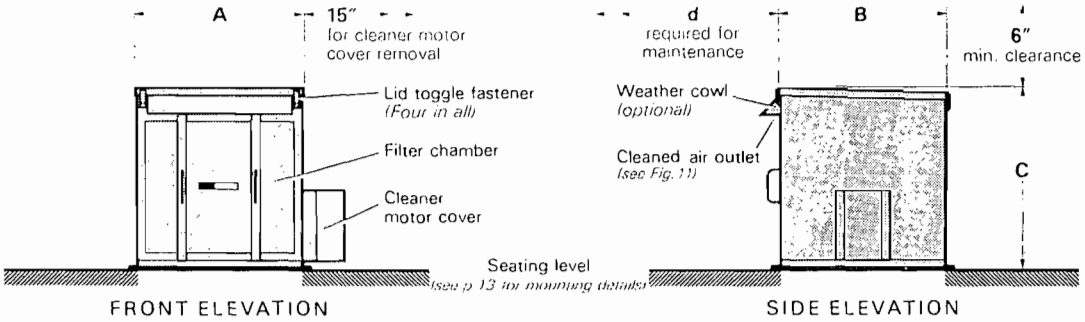


Fig. 6 Unimaster Venting Type dust control unit

Suitable for inside locations, and outside when fitted with weather cowl (see Fig. 11)

Model UMA 150V illustrated

TYPE UMA	Filtration area	DIMENSIONS*				Net weight (approx.)
		A	B	C	d	
70V	67 ft²	22⅞″	23¼″	2′ 6⅞″	22″	180 lb
100V	100 ft²	2′ 6⅜″	23¼″	2′ 6⅞″	22″	210 lb
150V	150 ft²	2′ 6⅜″	2′ 6¾″	2′ 9″	2′ 6″	245 lb
250V	244 ft²	3′ 9⅜″	2′ 6¾″	2′ 9″	2′ 6″	335 lb

*Tolerance ±⅛″

Venting Units, Type UMA V, with Dust Container

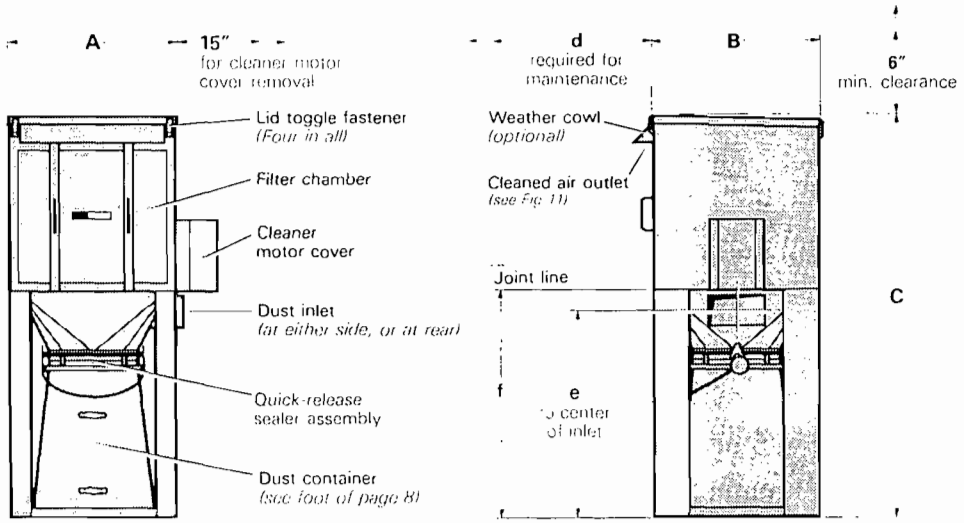


Fig.7 Unimaster Venting Type Unit with Dust Container

Suitable for inside locations, and outside when fitted with weather cowl (see Fig.11)

Model UMA 154V illustrated

TYPE UMA	Filtration area	DIMENSIONS*						Inlet† (inside dims.)	Duct dia. size range	Dust container	Net weight (approx.)
		A	B	C	d	e	f				
72V	67 ft²	22⅞″	23¼″	4′ 10″	22″	2′ 1¼″	2′ 4½″	4″ × 6⅝″	3″ to 6″″	2 ft³	240 lb
74V	67 ft²	22⅞″	23¼″	6′ 2¼″	22″	3′ 5¼″	3′ 8½″	4″ × 6⅝″	3″ to 6″	4 ft³	260 lb
102V	100 ft²	2′ 6⅜″	23¼″	5′ 1¼″	22″	2′ 4″	2′ 7⅞″	5½″ × 10¾″	4″ to 8″	2 ft³	300 lb
104V	100 ft²	2′ 6⅜″	23¼″	5′ 10¼″	22″	3′ 1″	3′ 5″	5½″ × 10¾″	4″ to 8″	4 ft³	320 lb
152V	150 ft²	2′ 6⅜″	2′ 6¾″	5′ 3⅜″	2′ 6″	2′ 4″	2′ 7⅞″	5½″ × 10¾″	4″ to 9″	2 ft³	345 lb
154V	150 ft²	2′ 6⅜″	2′ 6¾″	6′ 0½″	2′ 6″	3′ 1″	3′ 5″	5½″ × 10¾″	4″ to 9″	4 ft³	365 lb
252V	244 ft²	3′ 9⅜″	2′ 6¾″	5′ 11⅝″	2′ 6″	2′ 11½″	3′ 4⅛″	6¾″ × 12¼″	4″ to 9″	2 ft³	475 lb
254V	244 ft²	3′ 9⅜″	2′ 6¾″	6′ 8¾″	2′ 6″	3′ 8½″	4′ 1¼″	6¾″ × 12¼″	4″ to 9″	4 ft³	495 lb

*Tolerance ±⅛″ †DCE tolerance $^{+\frac{1}{16}''}_{0}$ (Note. Outside dimensions of duct connectors must not exceed inside dimensions of inlets).

Accessories

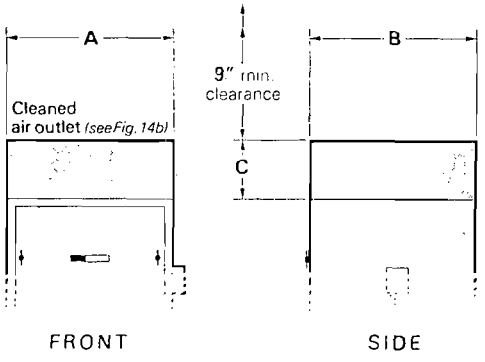


Fig. 8 Unimaster Acoustic Diffuser
Size UMA 150 illustrated

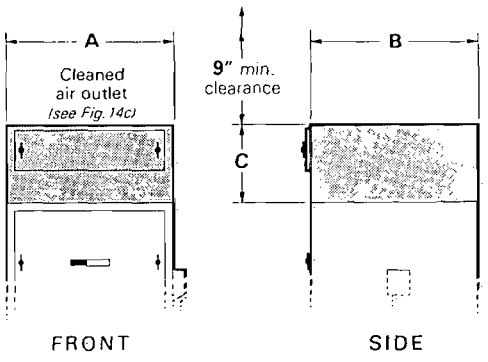


Fig. 9 Unimaster Secondary Filter
Size UMA 150 illustrated

TYPE UMA	DIMENSIONS* A	B	C	Net weight (approx.)
70	$22\frac{5}{8}$"	$22\frac{5}{8}$"	$8\frac{1}{8}$"	20 lb
100	2' $6\frac{1}{8}$"	$22\frac{5}{8}$"	$11\frac{1}{8}$"	30 lb
150	2' $6\frac{1}{8}$"	2' $6\frac{1}{8}$"	$10\frac{1}{8}$"	35 lb
250	3' $9\frac{1}{8}$"	2' $6\frac{1}{8}$"	$11\frac{1}{8}$"	50 lb

*Tolerance $\pm\frac{1}{8}$"

TYPE UMA	DIMENSIONS* A	B	C	Net weight (approx.)
70	–	–	–	–
100	2' $6\frac{1}{8}$"	$22\frac{5}{8}$"	14"	45 lb
150	2' $6\frac{1}{8}$"	2' $6\frac{1}{8}$"	14"	60 lb
250	3' $9\frac{1}{8}$"	2' $6\frac{1}{8}$"	14"	80 lb

*Tolerance $\pm\frac{1}{8}$"

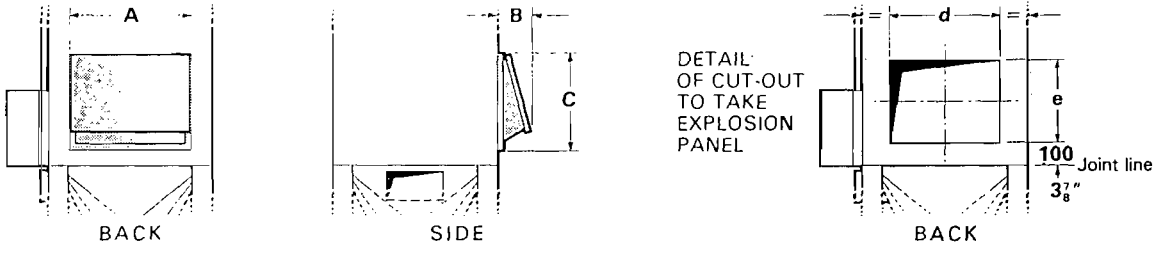


Fig. 10 Unimaster Explosion Panel
Size UMA 150 illustrated

TYPE UMA	DIMENSIONS* A	B	C	d	e	Net weight approx.
70	$19\frac{5}{8}$"	$5\frac{1}{2}$"	$17\frac{1}{2}$"	$17\frac{3}{8}$"	$15\frac{1}{8}$"	11 lb
100	$22\frac{5}{8}$"	$5\frac{1}{2}$"	$17\frac{1}{2}$"	$20\frac{1}{4}$"	$15\frac{1}{8}$"	13 lb
150	$22\frac{5}{8}$"	$5\frac{1}{2}$"	$17\frac{1}{2}$"	$20\frac{1}{4}$"	$15\frac{1}{8}$"	13 lb
250	$22\frac{5}{8}$"	$5\frac{1}{2}$"	$17\frac{1}{2}$"	$20\frac{1}{4}$"	$15\frac{1}{8}$"	13 lb

*Tolerance $\pm\frac{1}{8}$"

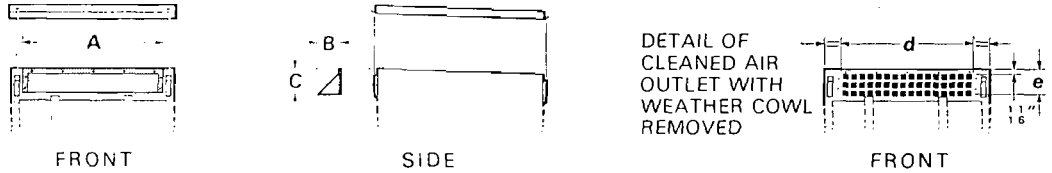
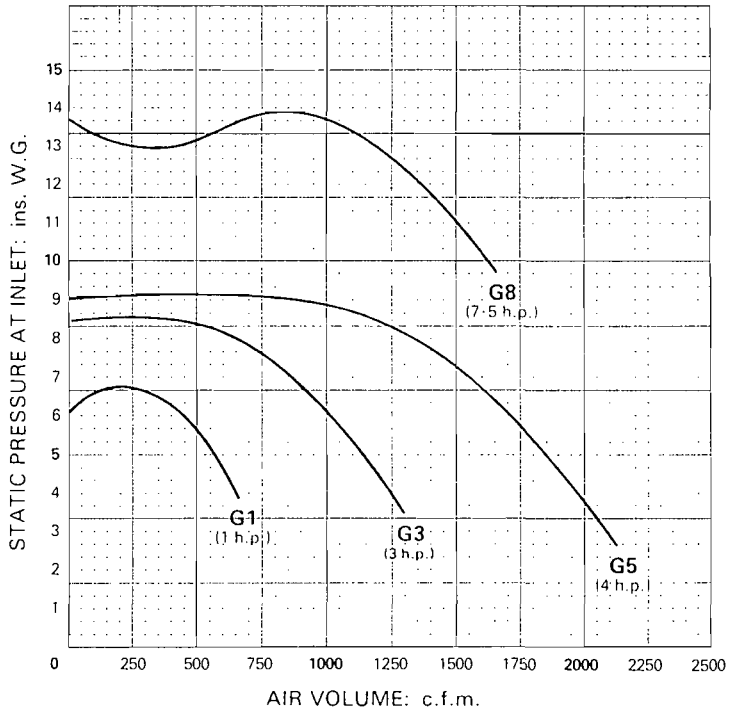


Fig. 11 Unimaster Weather Cowl
Size UMA 150V illustrated

TYPE UMA	DIMENSIONS* A	B	C	d	e	Net weight (approx.)
70	$17\frac{3}{4}$"	$3\frac{3}{8}$"	$3\frac{7}{8}$"	$16\frac{1}{2}$"	$3\frac{1}{8}$"	2 lb
100	2' $1\frac{3}{8}$"	$3\frac{3}{8}$"	$3\frac{7}{8}$"	2' $0\frac{1}{4}$"	$3\frac{1}{8}$"	2 lb
150	2' $1\frac{3}{8}$"	$3\frac{3}{8}$"	$3\frac{7}{8}$"	2' $0\frac{1}{4}$"	$3\frac{1}{8}$"	2 lb
250	3' $1\frac{5}{8}$"	$3\frac{3}{8}$"	$3\frac{7}{8}$"	3' $0\frac{3}{8}$"	$3\frac{1}{8}$"	4 lb

*Tolerance $\pm\frac{1}{8}$"

Fan details



UNIT PERFORMANCE CURVES

These curves were obtained from volume and pressure readings taken at unit inlet with the filter clean.

Standard & Hopper Type units

To select the most suitable fan for a given application:

1. Determine the air rate, in cfm, needed to entrain the dust.
2. Estimate pressure drop through connected system — i.e. between point of entrainment and unit inlet.
3. Assess pressure drop across filter prior to shaking, usually 2 - 4 in. W.G.
4. Sum of **2** and **3** = W.G. required.
5. Consult graph for fan performances available.

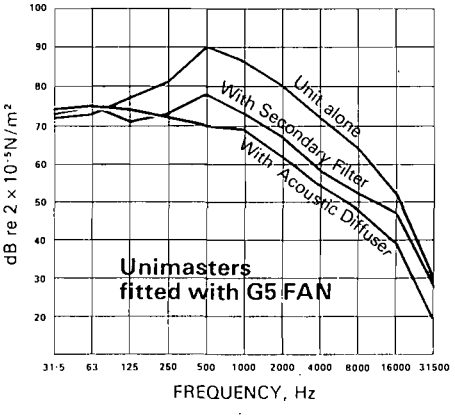
Sack Tipping Units have G3 fans with modified outlet to ensure adequate face velocities at the tipping hatch under normal operating conditions.

Typically, the exhaust rate for the UMA 250 STU is 750 cfm.

Sound pressure levels

The accompanying graph shows typical sound pressure levels versus frequency for Unimasters of different configurations. Continuous exposure to noise levels in excess of 90 dB(A) is prohibited by governmental regulations. Since the noise emanating from various sources is additive, many companies have established specifications limiting the noise level from an individual piece of equipment to 85 dB(A) or less. The Machine Tool Builders Association have established a test procedure for determining sound pressure levels.

The table shows the noise levels for the range of Unimasters in three different configurations. The readings given were taken in semi-reverberant surroundings at a radius of 1 meter from the equipment housing and at a height of 1.5 meters from floor level, using a precision sound level meter and octave band filter. As sound pressure levels are affected by installation conditions, the surroundings and other factors, variation from these readings can be expected with each field installation. However, these readings do serve as a guide indicating that noise levels reached by Unimasters fitted with an acoustic diffuser or secondary filter come well within acceptable limits.



COMPARISON OF UNIMASTER SOUND PRESSURE LEVELS, in dB re $2 \times 10^{-5} N/m^2$ —

Units alone / Units with Acoustic Diffuser / Units with Secondary Filter

	G1 FAN (UMA 70)			G3 FAN (UMA 100, 150 & 250)			G5 FAN (UMA 150 & 250)			G8 FAN (UMA 250 only)		
Frequency Hz	Unit alone	With A/D	With S/F	Unit alone	With A/D	With S/F	Unit alone	With A/D	With S/F	Unit alone	With A/D	With S/F
31·5	63	70	SECONDARY FILTER NOT SUPPLIED WITH UMA 70	67	67	68	72	74	73	75	80	76
63	66	73		71	71	73	73	75	75	78	77	80
125	69	74		75	75	69	77	74	71	80	76	74
250	78	75		78	75	70	81	72	73	82	75	74
500	80	70		90	71	78	90	70	78	81	71	69
1000	76	59		86	63	72	86	69	73	82	65	69
2000	71	53		78	57	65	80	62	67	81	62	68
4000	63	49		70	49	56	72	54	58	80	60	66
8000	56	43		63	43	51	64	48	52	68	54	56
16000	44	34		51	33	46	52	39	47	54	49	49
31500	23	18		29	17	27	30	19	28	32	30	27
Typical weighted sound levels, dB(A)	**81**	**69**	—	**90**	**71**	**78**	**90**	**71**	**78**	**87**	**72**	**74**

Aperture and mounting details

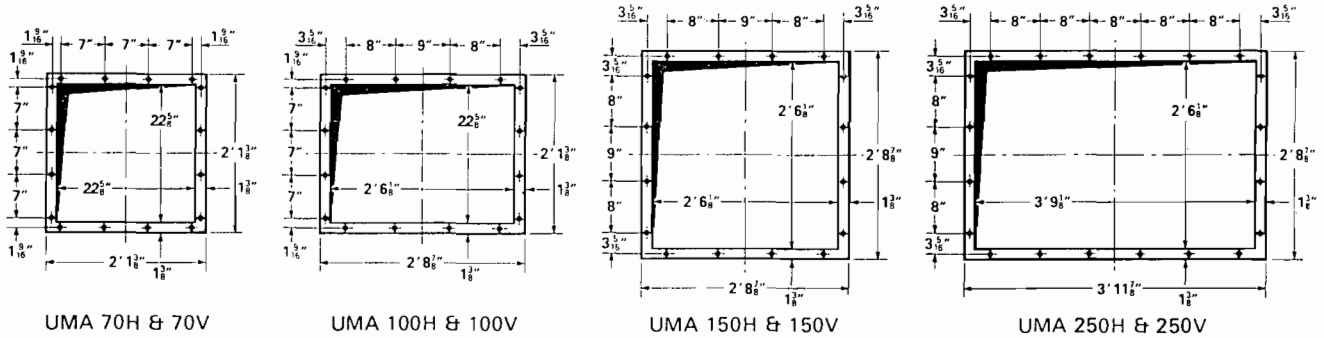


Fig. 12 Aperture and mounting-flange dimensions for Hopper and Venting type units

Tolerance for all dimensions $\pm\frac{1}{16}$"

For all sizes, drill $\frac{3}{8}$" dia. holes and fix with $\frac{5}{16}$" dia. bolts.

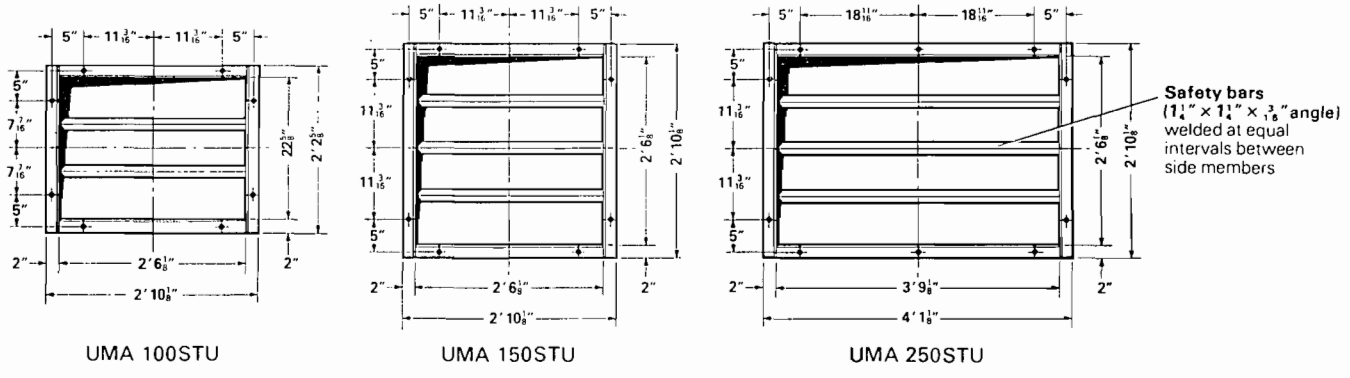
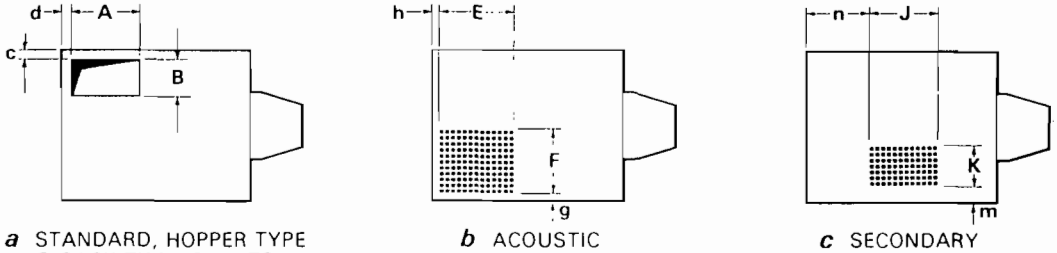


Fig. 13 Aperture and mounting-flange dimensions for Sack Tipping Units

Tolerance for all dimensions $\pm\frac{1}{16}$"

For all sizes, drill $\frac{7}{16}$" dia. holes and fix with $\frac{3}{8}$" dia. bolts.

Cleaned air outlet details



(For Venting Units see Fig. 11 on page 11)

Fig. 14 Cleaned air outlet dimensions

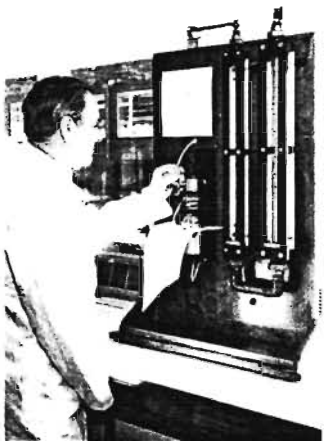
NOTE: ***a*** shows required position and inside dimensions for customers' outlet duct transformers to suit all available fan sizes; ***b*** and ***c*** represent outlet grilles as punched in tops of accessories

Size UMA 100 illustrated

TYPE UMA	DIMENSIONS*											
	A	B	c	d	E	F	g	h	J	K	m	n
70	$8\frac{5}{8}$"	$6\frac{1}{4}$"	$1\frac{5}{8}$"	$\frac{7}{8}$"	$8\frac{7}{8}$"	$8\frac{7}{8}$"	$\frac{3}{4}$"	$\frac{3}{4}$"	–	–	–	–
100	$12\frac{5}{8}$"	$7\frac{1}{8}$"	$\frac{3}{4}$"	1"	$11\frac{5}{8}$"	$9\frac{7}{8}$"	$\frac{3}{4}$"	$\frac{3}{4}$"	$10\frac{7}{8}$"	$6\frac{1}{4}$"	$2\frac{1}{8}$"	$9\frac{5}{8}$"
150	$14\frac{5}{8}$"	$9\frac{1}{4}$"	$3\frac{7}{8}$"	$\frac{3}{4}$"	$12\frac{5}{8}$"	$12\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{3}{4}$"	$19\frac{7}{8}$"	$8\frac{1}{8}$"	$1\frac{3}{8}$"	$5\frac{1}{8}$"
250	15"	$9\frac{1}{4}$"	$3\frac{7}{8}$"	$9\frac{7}{8}$"	$13\frac{3}{8}$"	$13\frac{3}{8}$"	$\frac{3}{4}$"	$\frac{3}{4}$"	$19\frac{7}{8}$"	$8\frac{1}{8}$"	$1\frac{3}{8}$"	$12\frac{5}{8}$"

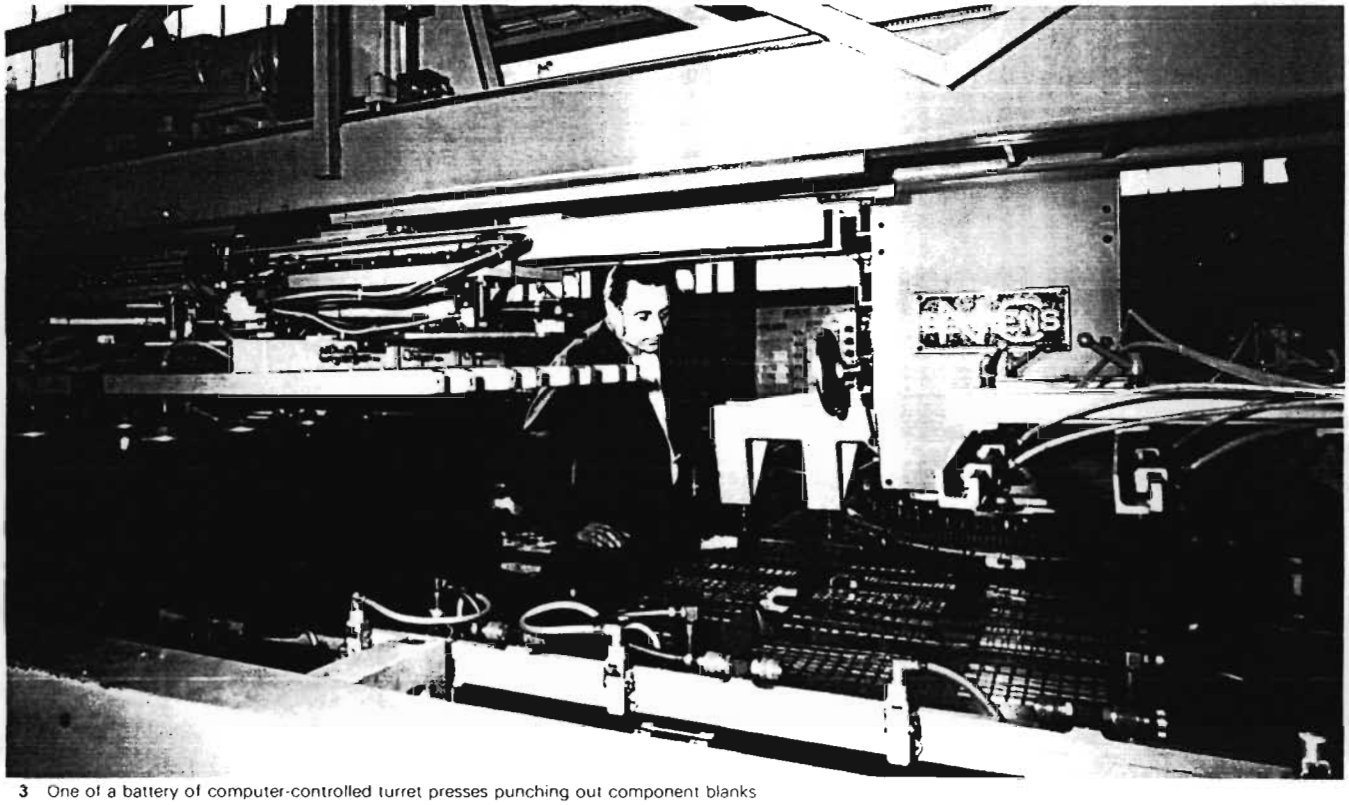
*Tolerance $\pm\frac{1}{8}$"

Production

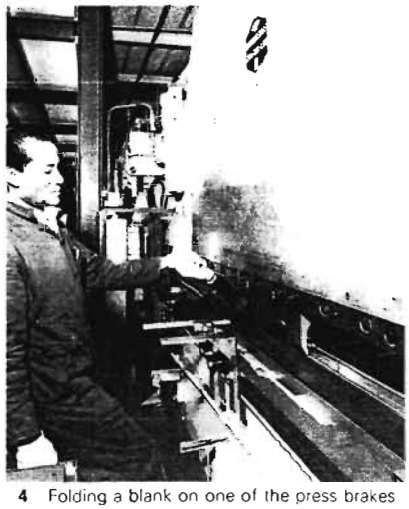


1 Cloth permeability test

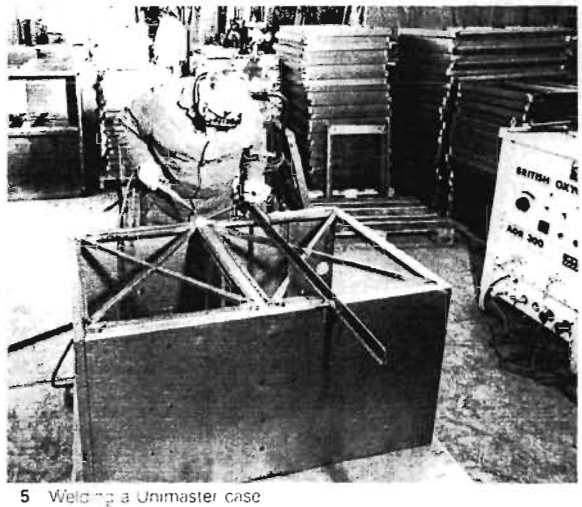
2 Filter elements being assembled in the sewing room



3 One of a battery of computer-controlled turret presses punching out component blanks

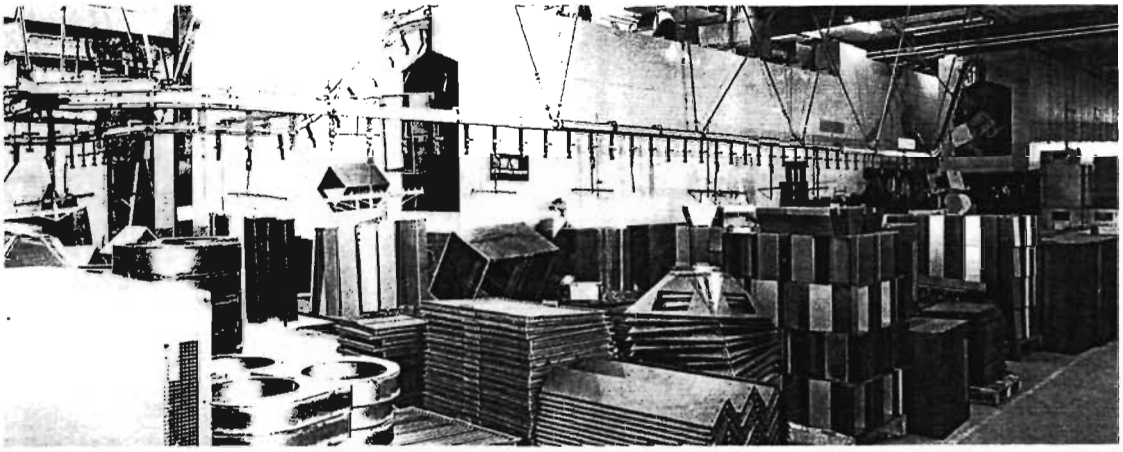


4 Folding a blank on one of the press brakes

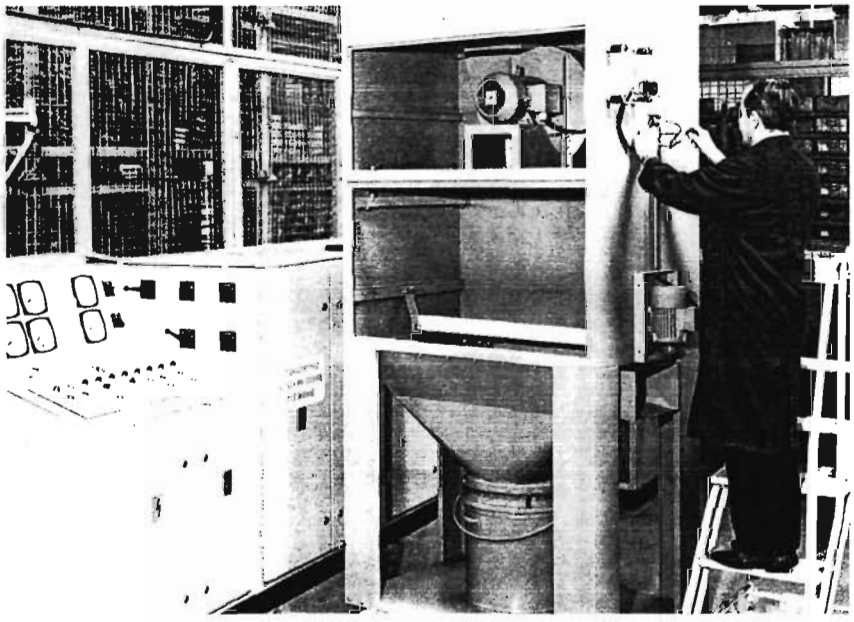


5 Welding a Unimaster case

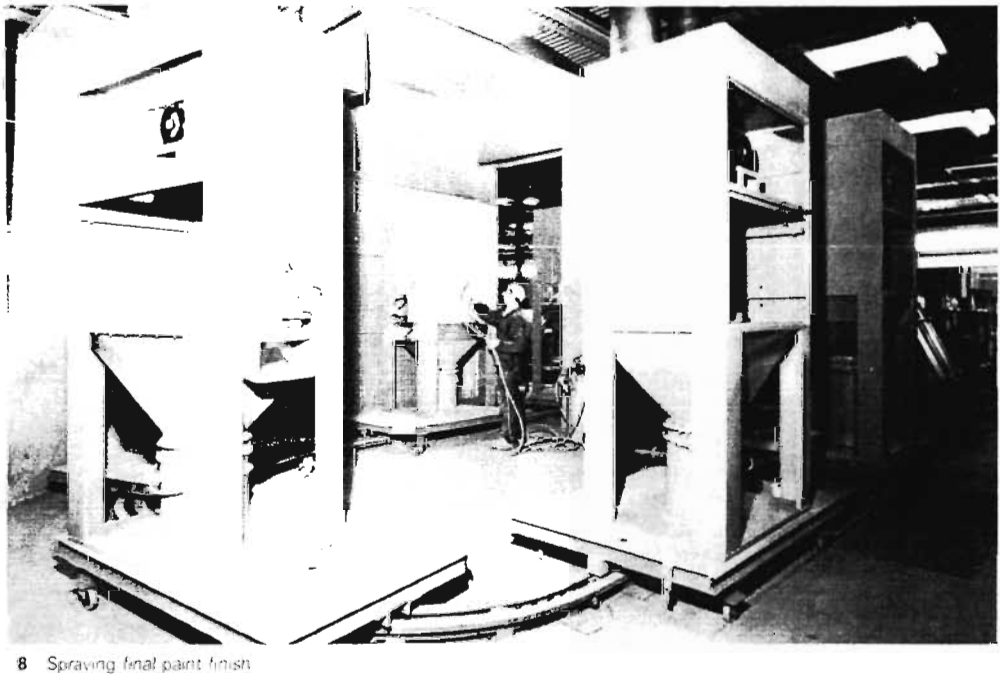
Production



6 Finished components prior to pretreatment and application of primer.

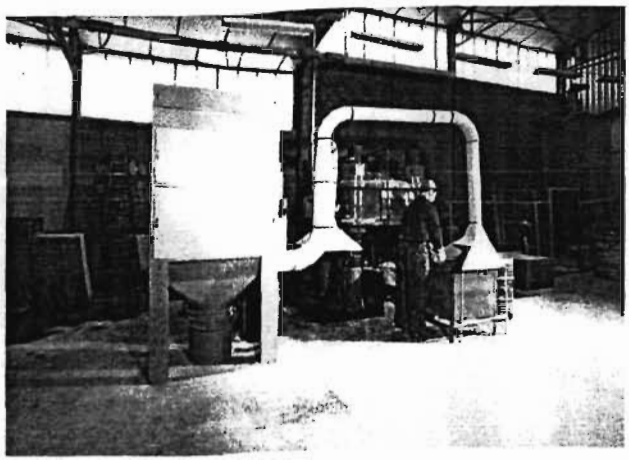


7 Assembled UMA 152 G5 undergoing electrical test

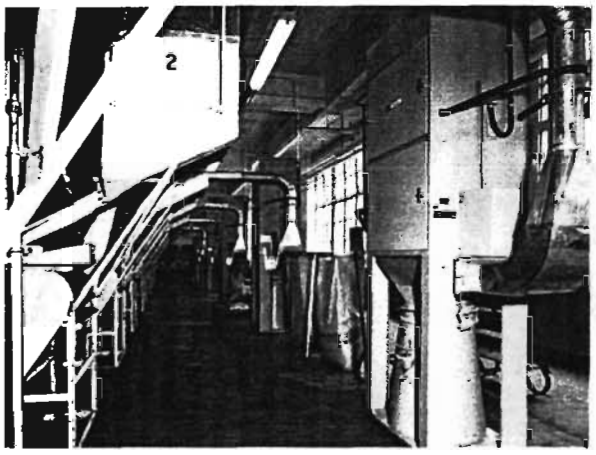


8 Spraying final paint finish

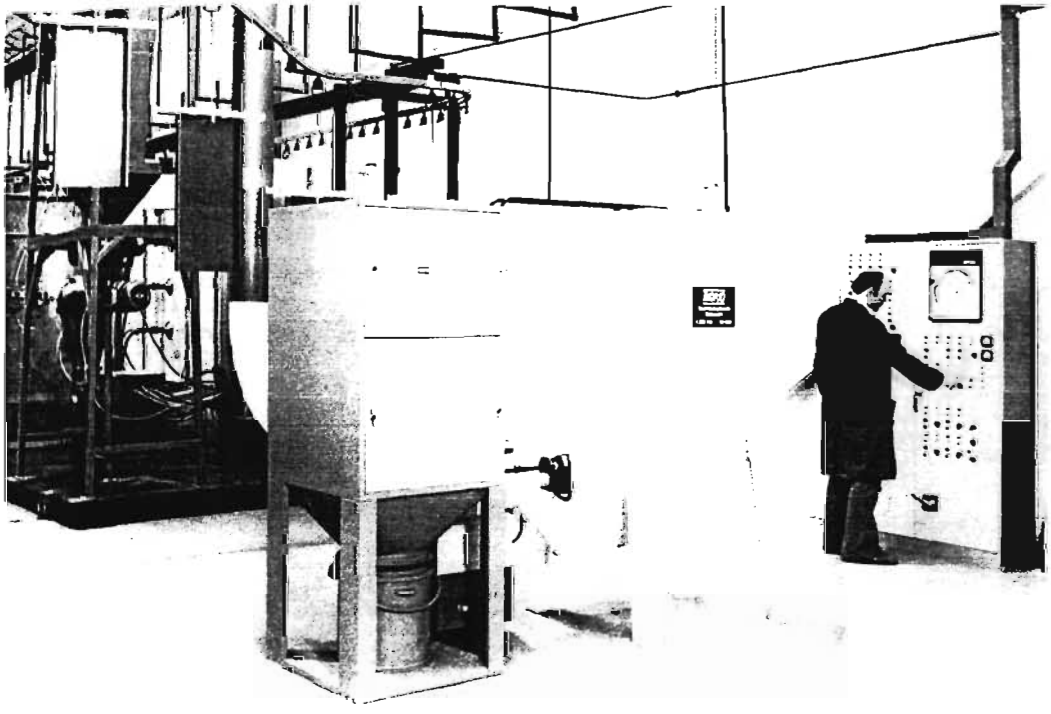
Applications



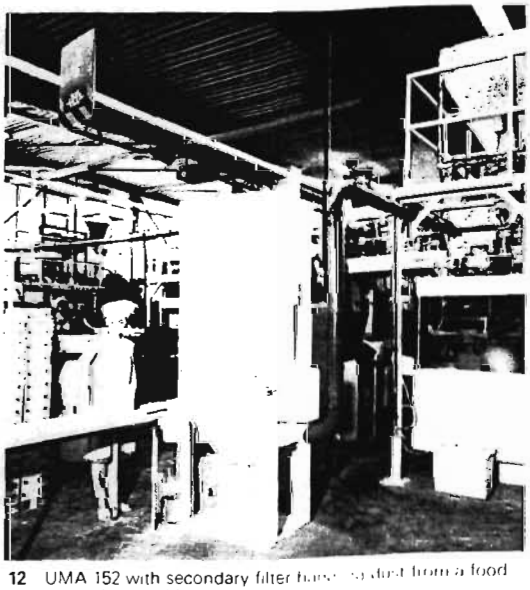
9 Asbestos weighing/compressing machine connected to a UMA 252 with secondary filter



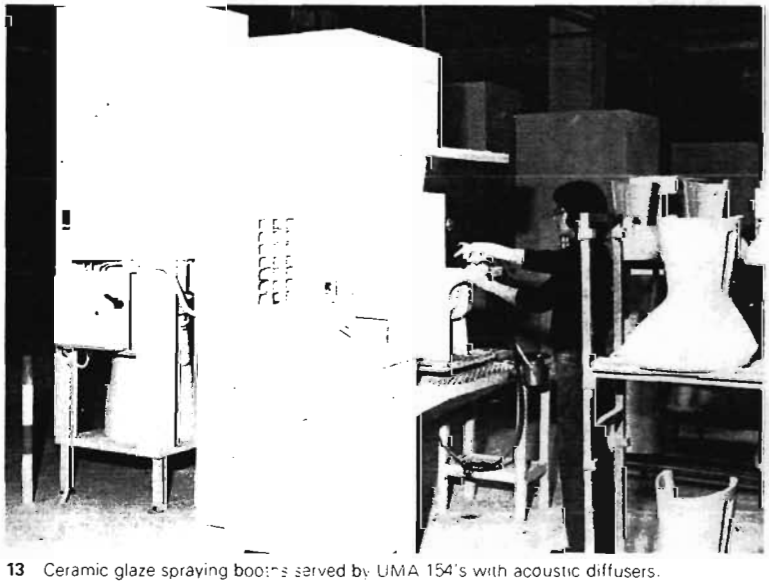
10 UMA 154 units with acoustic diffusers applied to nut processing in confectionery manufacture.



11 Surplus powder paint being collected by a UMA 152 in the finishing of domestic boiler components.

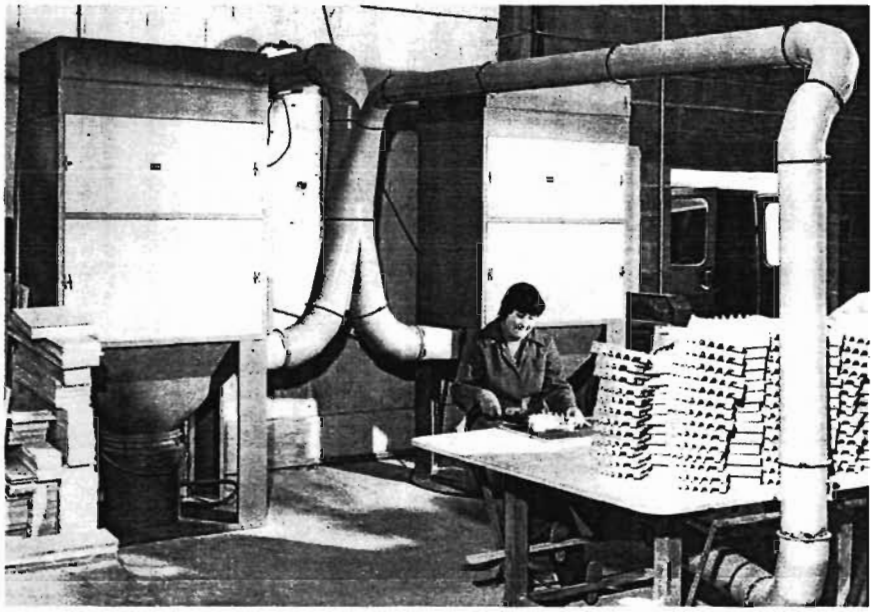


12 UMA 152 with secondary filter [illegible] dust from a food packaging machine.

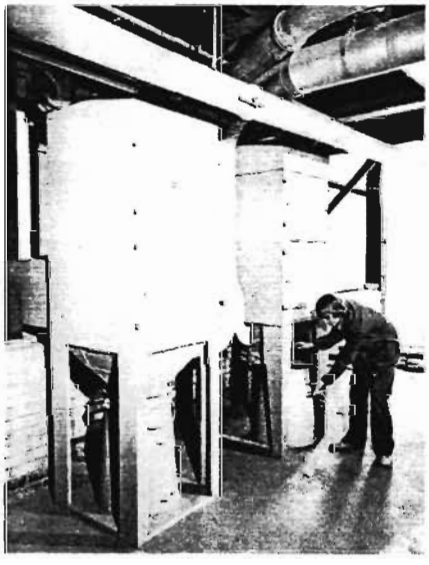


13 Ceramic glaze spraying booths served by UMA 154's with acoustic diffusers.

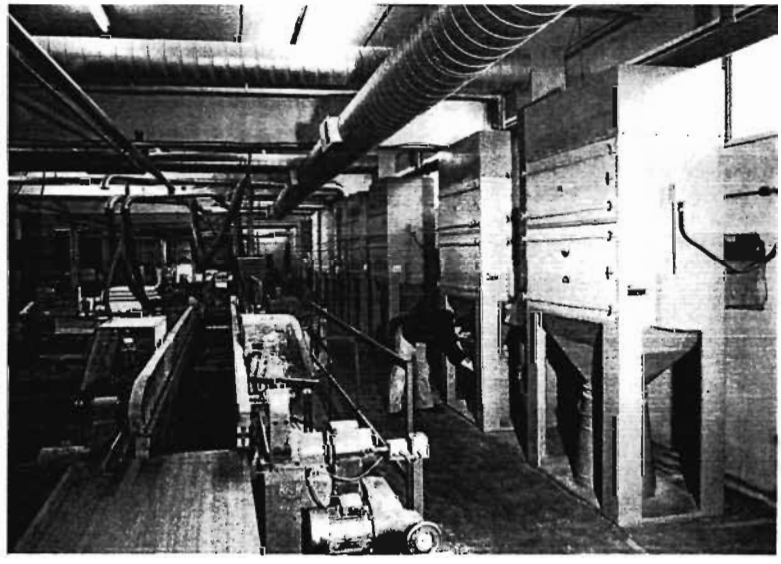
Applications



14 Two UMA 252's with secondary filters at a factory manufacturing asbestos components.

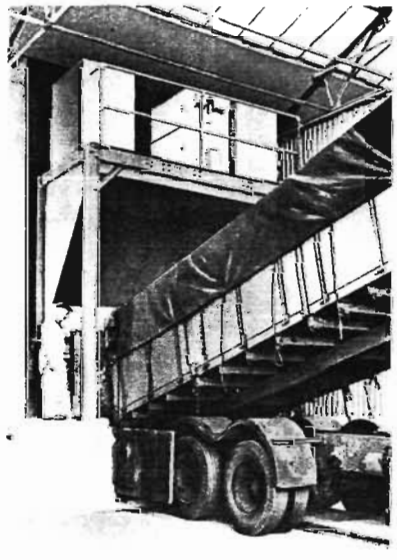


15 UMA 254's with acoustic diffusers on seed-grain processing. Note explosion relief duct(s) at rear, and reinforced doors.



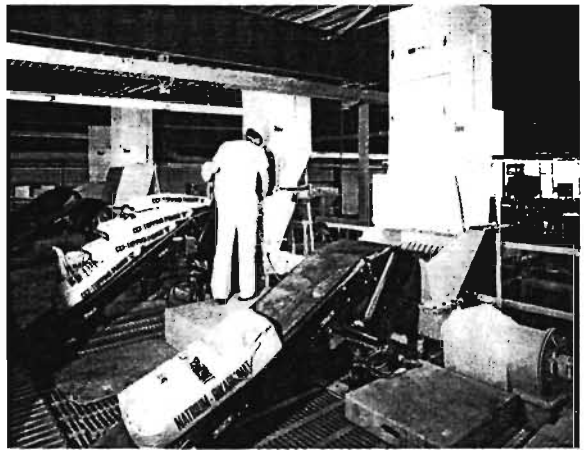
16 Woodwaste from furniture manufacture being collected by UMA 254's fitted with explosion relief ducts and acoustic diffusers.

17 Two UMA 150H units with acoustic diffusers serving a boat-builder's woodworking machines.



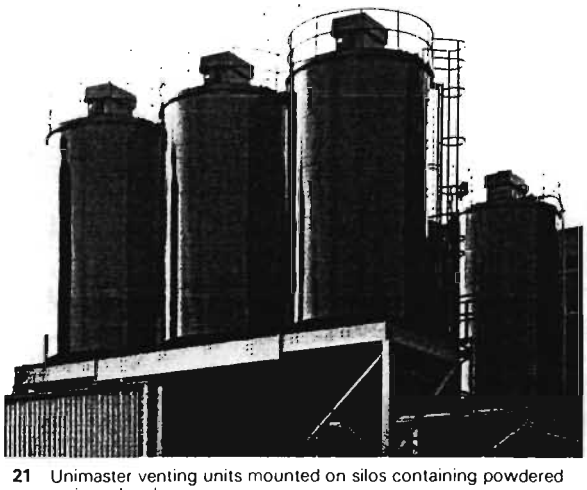
18 Three UMA 250H's controlling dust at a bulk grain delivery point.

Applications

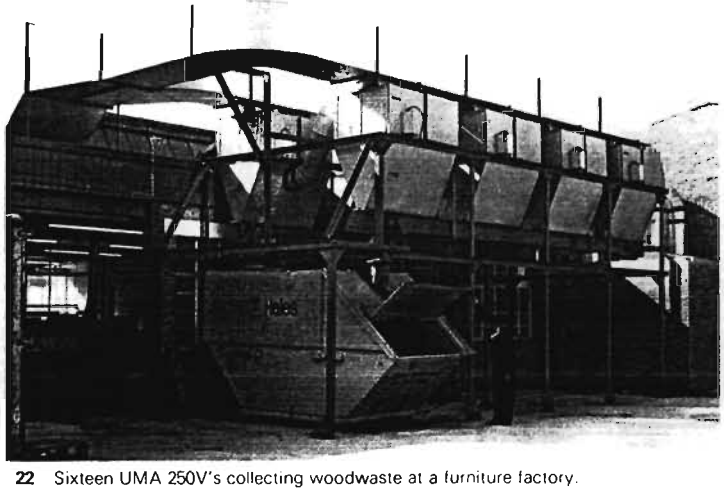


19 Four UMA 150H's with acoustic diffusers mounted over sack tipping points at a food factory.

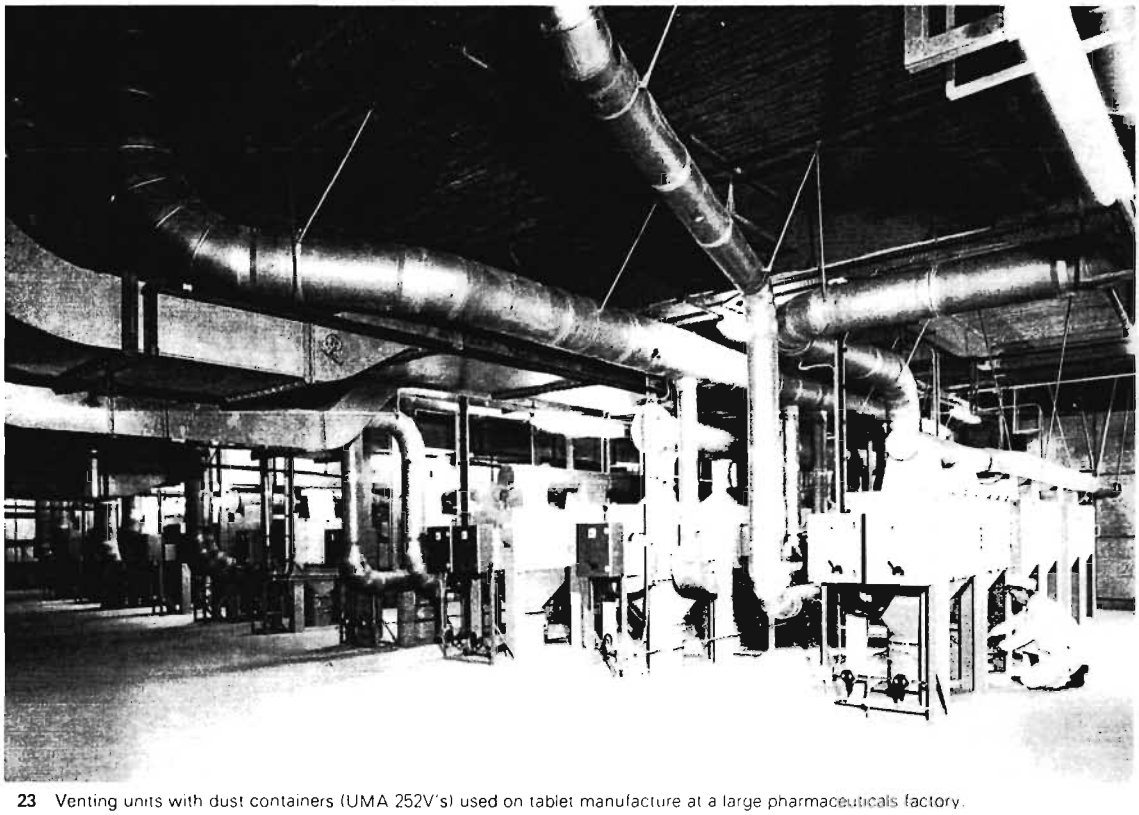
20 UMA 150 STU being used on weighing/ blending processes at an animal feed mill.



21 Unimaster venting units mounted on silos containing powdered activated carbon.



22 Sixteen UMA 250V's collecting woodwaste at a furniture factory.



23 Venting units with dust containers (UMA 252V's) used on tablet manufacture at a large pharmaceuticals factory.

Unit Collectors or a Central System

IN MANY CASES the designer of dust-control systems has a choice of using multiple self-contained unit collectors, such as the Unimaster, or a single large collector with a system of ductwork connected to each exhaust hood. Central systems are worthy and may be the best choice in many situations. However, other situations clearly call for individual collectors for each exhaust hood or for several hoods in close proximity. An intelligent choice requires consideration of the relative merits of unit collectors versus a central system.

Generally, power costs will favor the unit collector approach. Since unit collectors can be located relatively close to the exhaust hood considerably less ductwork is required and the power necessary to move air through long runs of duct is eliminated. In many cases there will be times of no activity at some exhaust hoods in a central system yet the entire system continues to operate at its maximum power requirement. When unit collectors are employed, it would be normal to take the collector out of service when the operation being exhausted is inactive and realize an additional power saving.

RELATIVE ADVANTAGES AND DISADVANTAGES OF UNIT COLLECTORS VERSUS A CENTRAL SYSTEM

ITEM	UNIT COLLECTORS	CENTRAL SYSTEM
Flexibility	Maximum degree of flexibility. Operating equipment can be put into service, taken out of service, moved etc., without affecting other equipment.	Minimum degree of flexibility for future equipment changes; the ductwork is tailor-made for the job.
Engineering	Design calculations are simple.	Design calculations are more time consuming. Layout of system must be in complete detail with all obstructions cleared and lengths of runs accurately determined.
Reliability	Any malfunction affects only the machine being exhausted.	A malfunction puts entire system and all equipment being exhausted out of service. The complexity of the ducting network adds additional opportunity for failure, such as erosion at elbows, plugging of ductwork, or improper balance of airflow.
Maintenance		
• Trouble shooting	Trouble shooting is simple because the equipment is smaller and problems are inherently isolated.	More difficult due to size of equipment and complexity of the system.
• Attention	Unit collectors benefit from operator interest and attention. The collector is close to the machine being exhausted, and the machine operator will care about its performance and notice any change in performance. The operator can provide routine preventive maintenance.	Central systems become the responsibility of central maintenance. Their first priority is the production equipment. Seldom are problems identified before a complete failure occurs, resulting in lost production.
Dust disposal		
• Automated	Most expensive if any automatic system is to be utilized.	Least expensive but expensive if an automatic system is to be utilized.
• Manual	If proper equipment is supplied, it can be easily handled by operator with maximum assurance that it will be done as required.	Must be scheduled for personnel not normally concerned with proper operation of the collector.
Space	Unit collectors require a greater plan area, but in several places. They require less head room, and no overhead space is lost due to ductwork.	Central systems require less plan area, but it must be all in one piece. They require more head room, and overhead space is lost to ductwork.
Recirculation	When cleaned air is recirculated, no return ductwork is required. The operator's attention to collector performance assures better reliability when recirculating.	When cleaned air is recirculated, return ductwork generally is required. In cold climates, return air ducts and central collector must be insulated when located outside the building. A larger, more expensive makeup air system is required initially with a central system if no return air duct system is employed. A failure of one bag in a central system collector negates recirculation of entire air volume until broken bag is located and replaced.

DCE, Inc.
11301 Electron Drive
Jeffersontown KENTUCKY 40299-9990
Tel. (502) 267-0707 Telecopier (502) 267-4490
Telex 204306

dust control equipment for industry
DCE Unimaster* units. DCE Dalamatic* multi module automatic filters. DCE Dalamatic* Insertable filters. DCE Dalamatic* units.

* Registered trade marks

AC 53-169742

White Cement Silo

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO ~~OPERATE~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Cement Silo Baghouse [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Boral Concrete Products, Inc. doing business as Lifetile Corporation **COUNTY:** Polk

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) Cement Silo

SOURCE LOCATION: Street Story Road City Lake Wales

UTM: East 17-450.2 North 3085.6

Latitude 27 ° 53 ' 47 "N Longitude 81 ° 30 ' 20 "W

APPLICANT NAME AND TITLE: Dale Reeves, General Manager

APPLICANT ADDRESS: P.O. Box 632, Lake Wales, Florida 33859

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Boral Concrete Products, Inc.

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

NOTE: A letter of authorization is being sent under separate cover.

Signed: Dale Reeves

Dale Reeves, General Manager
Name and Title (Please Type)

Date: 9/1/89 Telephone No. (813) 676-9405

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

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

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

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Bill Thomas P.E III	Initial	
	Date	
2. BAQM CAPS	Initial	
	Date	
3. TT 306G	Initial	
	Date	
4.	Initial	
	Date	

REMARKS:
Const. of Minor Particulate Source at a Major VOC Facility.

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

RECEIVED
SEP 28 1989
DER - BAQM

FROM: Geo Richardson YA SC 552-7612

DATE

PHONE

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 Robert A. Baker

Robert A. Baker, P.E.
Name (Please Type)

Koogler & Associates Environmental Services
Company Name (Please Type)

4014 N.W. 13th Street, Gainesville, Florida 32609
Mailing Address (Please Type)

Florida Registration No. 21118 Date: 9/1/89 Telephone No. (904) 377-5822

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.

Adding a 100 ton white cement storage silo to be vented by a new baghouse. The white cement will reduce an equal amount of grey cement currently being used. Total particulate emissions from the plant will remain the same.

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

Start of Construction November 1, 1989 Completion of Construction January 15, 1990

C. Costs of pollution control syatem(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.)

Cost of pollution controls is estimated to be $4,000 to vent the new silo to a new baghouse.

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

NA

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr_____; if seasonal, describe:_____

NOTE: Actual operating time will be about 156 hours per year.

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

1. Is this source in a non-attainment area for a particular pollutant? NO

   a. If yes, has "offset" been applied?

   b. If yes, has "Lowest Achievable Emission Rate" been applied?

   c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. NO

3. Does the State "Prevention of Significant 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

   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 Incineratore)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Cement	Particulate	100	26 TPH	See Figure 1

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

1. Total Process Input Rate (lbs/hr): 52,000

2. Product Weight (lbs/hr): 52,000

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/~~hr~~ hr	T/yr	
Particulate	0.07	0.0055	27.06	27.06	7.05	0.55	Figure 1

[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)
Baghouse	Particulate	99%	100 microns	AP-40
Torit Model TD 486				
--				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NA			

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis: NA

Percent Sulfur:_____ Percent Ash:_____

Density: _____ lbs/gal Typical Percent Nitrogen:_____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution):_____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____

G. Indicate liquid or solid waates generated and method of diaposal.

Cement dust collected in baghouse will be returned to surge bin.

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

Stack Height: 40 ft. Stack Diameter: 1 ft.

Gas Flow Rate: 500 ACFM 485 DSCFM Gas Exit Temperature: Amb °F.

Water Vapor Content: 3 % Velocity: 10.6 FPS

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

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)]

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.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

NOT APPLICABLE

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 conatruction 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. Deacribe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Coat:

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.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE

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	Emiasion 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.

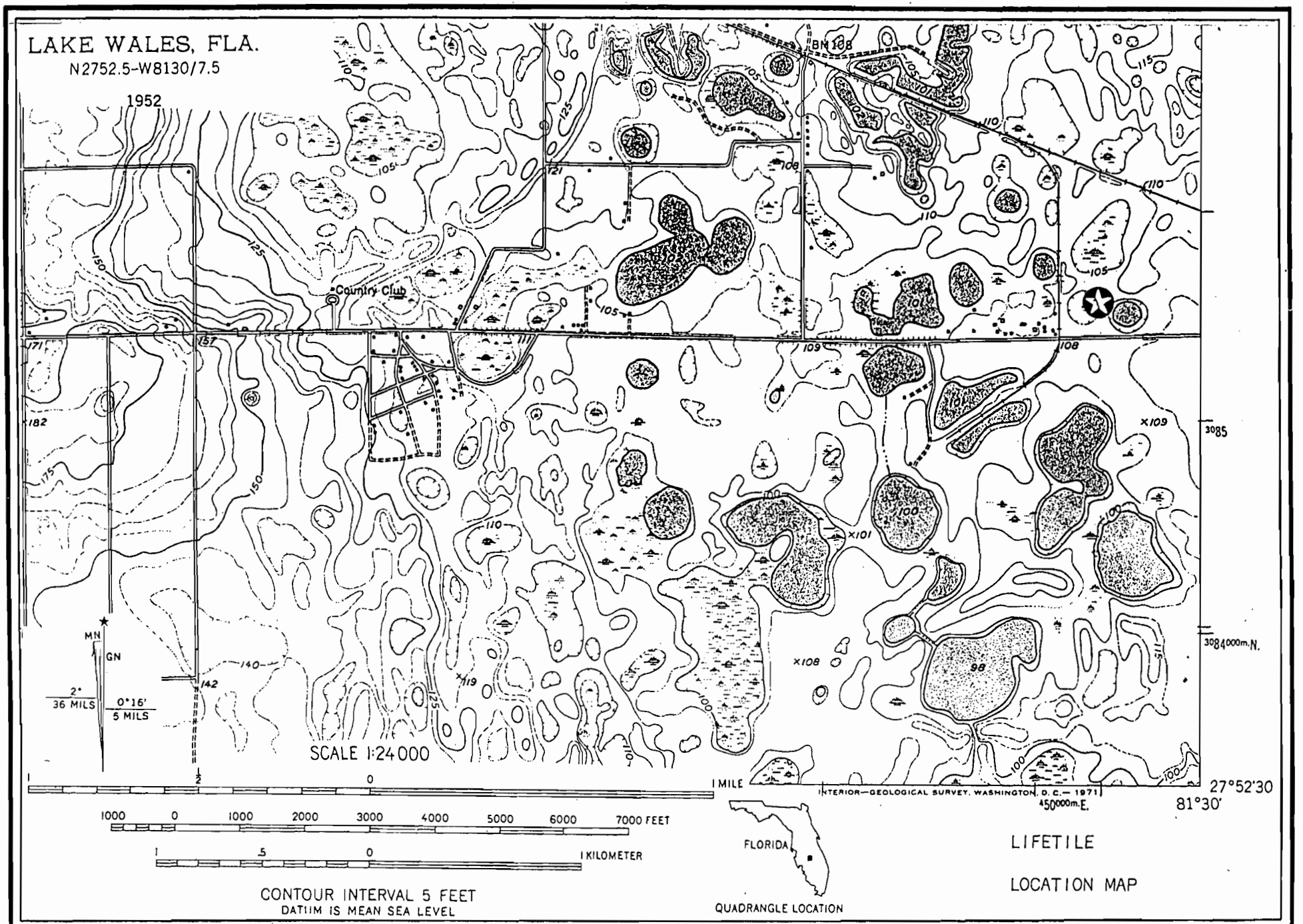
F. Attach all other information supportive to the PSD review.

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.

ATTACHMENT 1

GENERAL LOCATION MAP



KOOGLER & ASSOCIATES

ATTACHMENT 2

PROCESS FLOW DIAGRAM

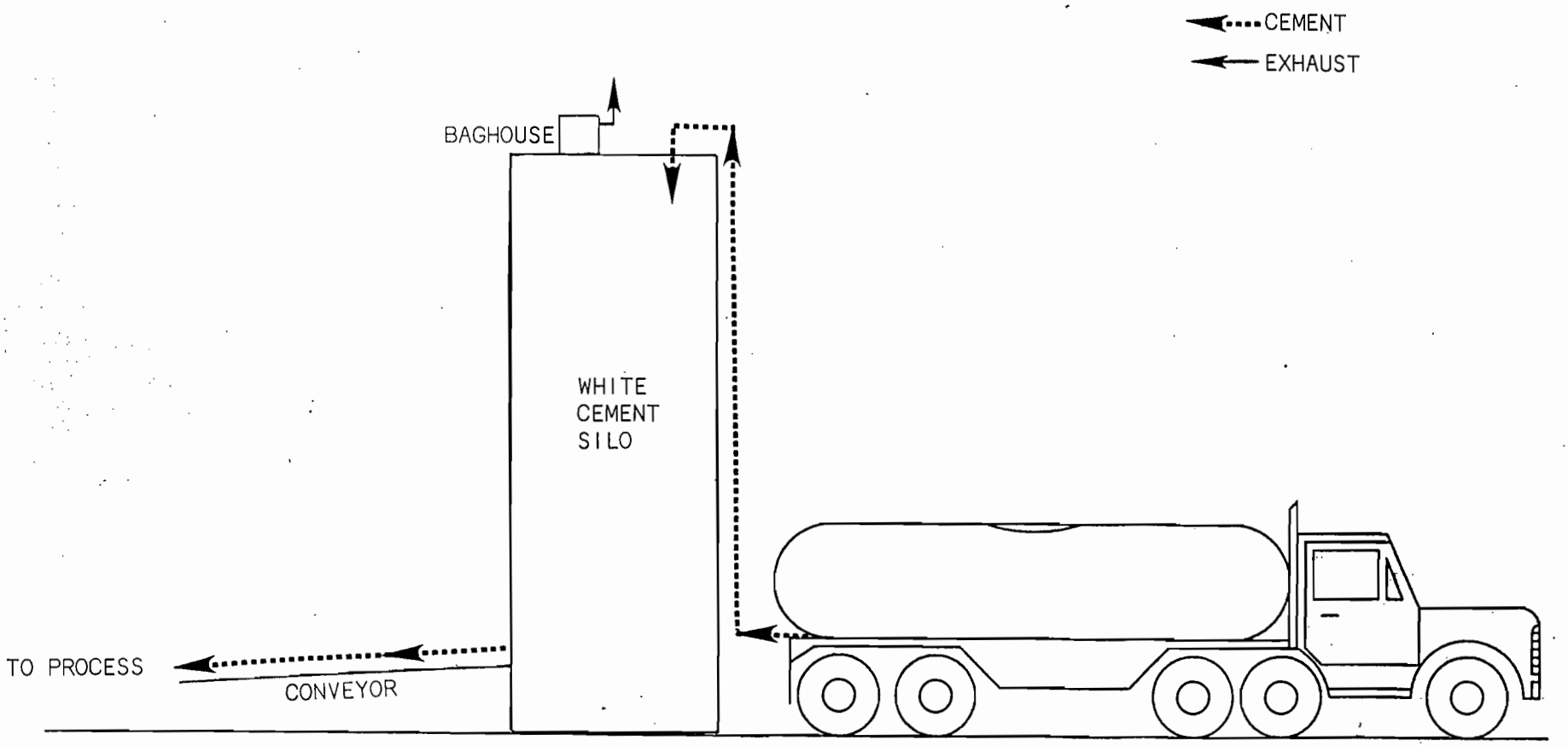
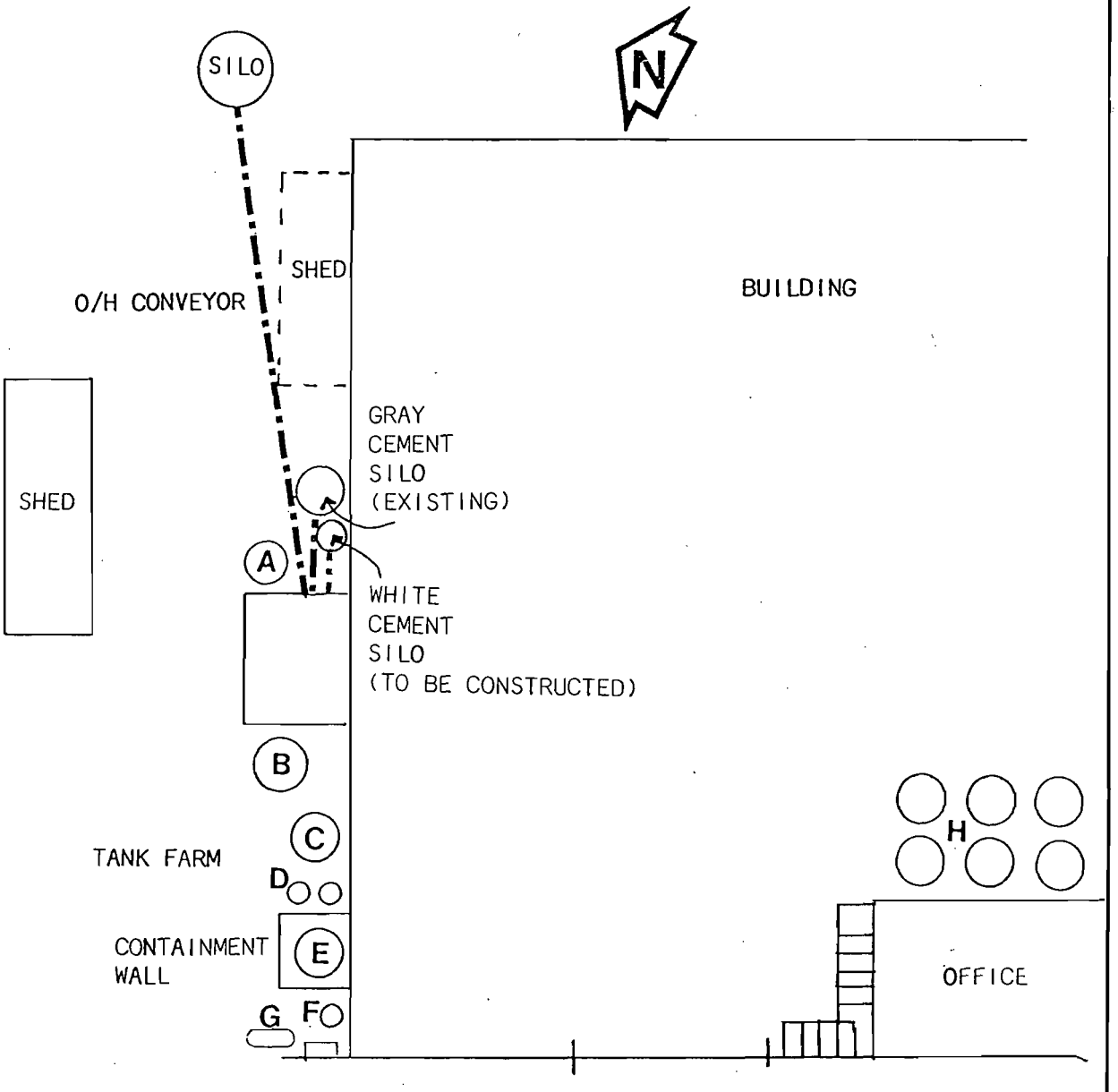


FIGURE 1 PROCESS FLOW DIAGRAM

KOOGLER & ASSOCIATES



PLOT PLAN

TANK NUMBER	USAGE
A	Sealant
B	Calcium Chloride
C	Calcium Chloride
D	Mold Oil Mix Tanks (2)
E	Mold Oil Storage
F	Water
G	Diesel Fuel
H	Paint Storage (6)

KOOGLER Ka ASSOCIATES

ATTACHMENT 3

PROJECT DESCRIPTION AND EMISSION CALCULATIONS

ATTACHMENT 3

Project Description

The purpose of this project is to install a new cement silo for storing white cement. A truck will pneumatically unload the white cement into the silo. The dust is to be controlled by a Torit Model TD 486 Baghouse or equivalent.

The specific baghouse design has not been chosen but the attached specifications present a good overview. Once a vendor has been chosen, design drawings and other technical and cost information will be supplied.

It should be noted that the current usage of grey cement will be reduced by the amount of white cement used. The total particulate emissions for the plant will remain the same.

Particulate Emissions

The calculation of particulate matter emissions is attached. The actual emissions were calculated based on an AP-42 emission factor of 0.27 lb/ton and a 99 percent collection efficiency.

Calculations

Inputs:

26	tons/truck
3	truck/week
52	wks/yr
1	hour to unload a truck
99%	removal efficiency for baghouse
0.27	lb. of emissions/ton of cement unloaded

Outputs:

$$\text{Cement (TPY)} = \frac{26 \text{ tons}}{\text{truck}} \times \frac{3 \text{ trucks}}{\text{week}} \times \frac{52 \text{ weeks}}{\text{yr}} = 4056 \text{ TPY}$$

Emissions (No Control)

$$\text{TPY} = \frac{0.27 \text{ lb}}{\text{ton}} \times \frac{4056 \text{ TPY}}{2000 \text{ lb/ton}} = 0.55 \text{ TPY}$$

$$\text{lb/hr} = 0.0055 \text{ TPY} \times \frac{2000 \text{ lb}}{\text{ton}} \times \frac{1}{3 \times 52 \text{ hrs.}} = 7.05 \text{ lb/hr}$$

Emissions (With Baghouse)

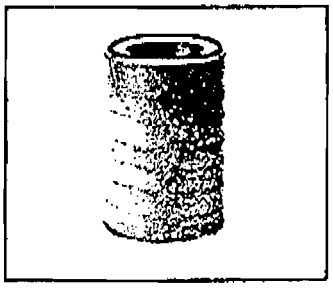
$$\text{TPY} = 0.55 \text{ TPY} \times (1-.99) = 0.0055 \text{ TPY}$$

$$\text{lb/hr} = 0.0055 \text{ TPY} \times \frac{2000 \text{ lb}}{\text{ton}} \times \frac{1}{3 \times 52 \text{ hrs}} = 0.07 \text{ lb/hr}$$

TORIT DUST COLLECTORS

EFFICIENT FILTRATION TECHNOLOGY

The Torit TD 486 is based on a unique combination of technologies. It involves the application of cartridge-type filters to a continuous-duty dust collection system. It offers you many advantages for treating large volumes of dust-laden air on a continuing basis: highly efficient filtration; increased filtering area for lower air-to-media ratios; increased ease of maintenance and operation; and substantially decreased collector headroom.

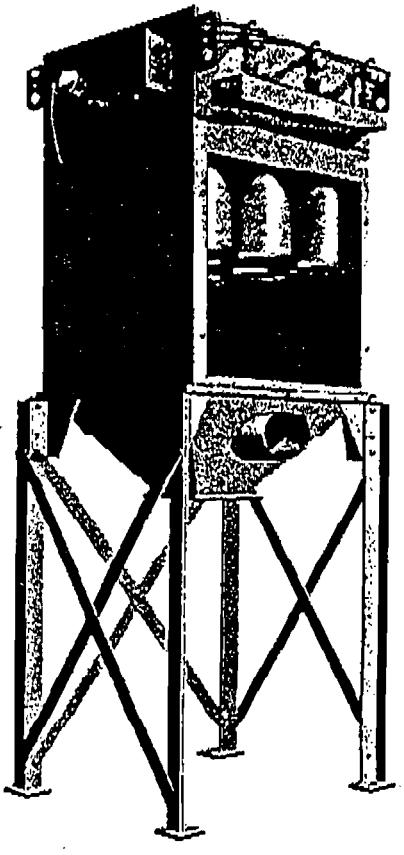


EFFECTIVE FINE PARTICLE CONTROL

The use of pleated, non-woven filter media is the key to the TD 486's filtering efficiency. Dust-laden air enters through the inlet of the collector—heavy particles fall immediately into the hopper bottom. As the air is drawn in through the filter cartridges, dust is deposited on the outside of the filtering media. With 9 filter cartridges, the system has 486 square feet of filter area, almost four times as much as a conventional collector of the same size. The generous filter area means low filtration velocity and high efficiency when handling submicron particulate.

CONTINUOUS PULSE-JET CLEANING

The TD 486's filter cartridges are cleaned automatically. The system remains on-line continuously for full-time pollution control, better product quality and longer machine life. A solid state timer controls cycle time. Solenoid valves introduce high pressure air into each filter cartridge in turn, through the venturi opening above it. Reverse air flow cleans the cartridges. Collected dust falls to the bottom of the collector. As each trio of cartridges is cleaned in succession, the remaining 6 remain on-line. Extremely high dust loadings are handled easily. The TD 486 is available in continuous duty/automatic or intermittent manual cleaning versions.



LESS Hopper & LEGS

EASY-TO-HANDLE FLEXIBILITY

The TD 486 requires up to 25% less headroom than conventional collectors—the highly efficient filter cartridges are 16" long, instead of standard 96" cloth tubes. Its compact size gives you great flexibility in location. Also, the TD 486 does the job with just 9 cartridges.

The Torit TD 486 is delivered to you in major assemblies. The system is available with different blower pack combinations for single-unit or multiple-unit applications. Its hopper can be fitted for a 55-gallon drum, or for a rotary airlock adapter. The TD is made with the same high quality TORIT puts into all its dust collection systems: air-tight all-steel construction, sealed seams, and gasketed doors and fittings. The TD 486 filter cartridge system is a major innovation in effective air pollution control, from TORIT.

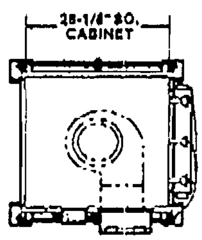
APPLICATIONS

Typical applications for Torit TD Collectors include:
• Metallurgical fumes • Grinding dust • Pharmaceutical dust • Powdered metals • Petro chemicals

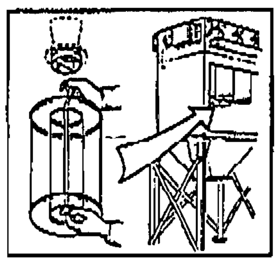
donaldson

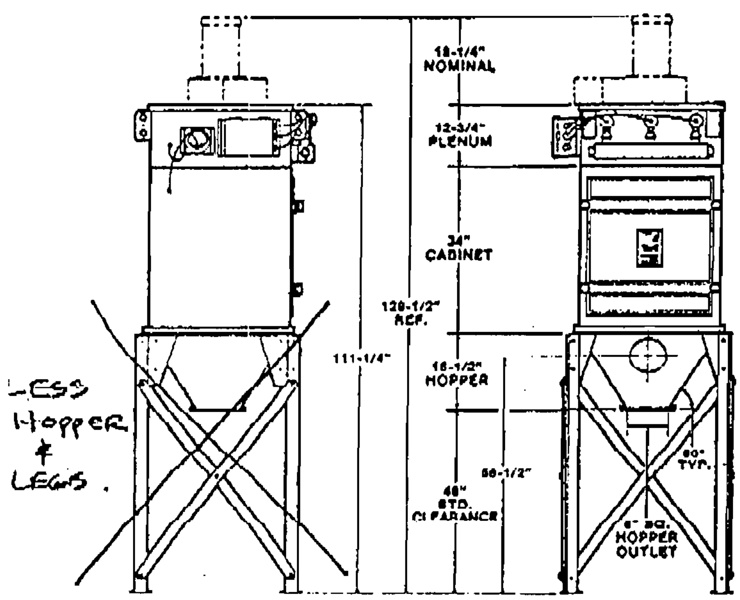
TORIT DUST COLLECTORS

FILTER CARTRIDGE SYSTEMS/TD 486



Quick-change feature allows fast cartridge removal and installation.





SPECIFICATIONS

Number of Filters	9
Filter Dimensions	7-7/8" OD x 16" long
Actual Filter Area	486 sq. ft.
Seismic Rating	Zone 3
Wind Load Rating	100 MPH
Roof Load Rating	30 lbs./sq. ft.
Hopper Size	3-1/2 cu. ft.
Number of Hopper Outlets	1
Number of Valves	3
Compressed Air Required	90-100 PSIG
Air Consumption	0.3 cu. ft./valve/pulse @ 90 PSI
Cabinet Size	16 cu. ft.
Housing Rating	-20" H_2O
Standard Finish	Exterior Blue
Shipping Weight (w/o options)	500 lbs. approx.

NOTES

- ☐ Standard 7" inlet. Inlet also available in 5", 6", and 8" ID. (All sides)
- ☐ Standard legs provide 40" clearance under the hopper flange. Bolt-on legs for special height requirements are available.
- ☐ TD systems must be attached to 90-100 PSIG in-plant compressed air supply for cleaning mechanism to function.
- ☐ Valves and control system operate on 120v. 60-cycle power.
- ☐ Exterior Blue is standard finish.
- ☐ Please state in-plant voltage when ordering power pack.

OPTIONAL EQUIPMENT

- ☐ Chamber silencer (w/damper).
- ☐ 3 HP blower.
- ☐ Adjustable damper (blower).
- ☐ Magnehelic gage.
- ☐ Photohelic gage.
- ☐ Solid state control timer.
- ☐ Manual push button pulse.
- ☐ Explosion vent.
- ☐ Filter media.
- ☐ 5", 6", 7", 8" ID hopper inlets.
- ☐ Rotary airlock valve (hopper).
- ☐ Slide gate (hopper).
- ☐ 55 gal. drum cover (hopper).
- ☐ Explosion proof solenoids.

PERFORMANCE TESTED

Performance ratings and A-scale sound level readings are available on each TD collector-power pack combination. These ratings are read and verified under standard test conditions in TORIT's laboratories.

TORIT district sales representatives are conveniently located throughout the United States and Canada. One will gladly work with you on your in-plant air pollution problems, and offer complete recommendations at no obligation to you. Check your Yellow Pages, under "Dust Collecting Systems", for local listing, or write.

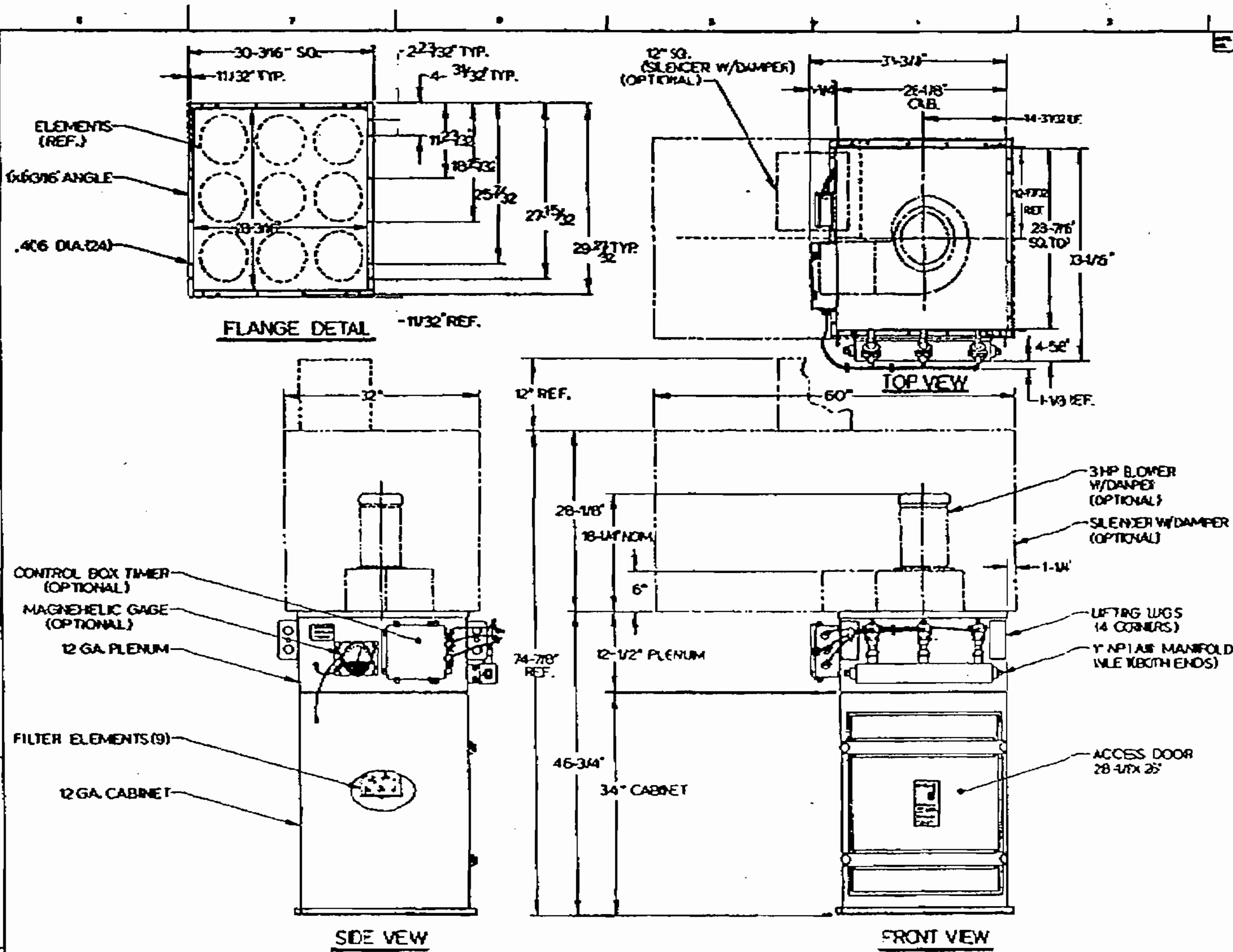
LEADERS IN CONTROL OF IN-PLANT AIR POLLUTION

donaldson

Donaldson Company Inc.
Torit Division
Box 1299
Minneapolis, Minnesota 55440

Phone (612) 887-3921
Telex 291038

TD-486-001



SPECIFICATIONS FOR MODEL TD 486 OPEN BOTTOM

- NO. OF FILTERS ______ 9
- FILTER DIMENSIONS ______ 7-7/8OD x 15"LG
- ACTUAL FILTER AREA ______ 186 SQ.FT
- SEISMIC RATING ______ ZONE-3
- WIND LOAD RATING ______ 100 MPH
- ROOF LOAD RATING ______ 30 LBS/SQ.FT
- NO. OF VALVES ______ 3
- COMPRESSED AIR REQ'D. ______ 50-100 PSIG
- AIR CONSUMPTION ___ 3 FT³/VALVE/PULSE @ 90 PSI
- CABINET SIZE ______ 16 CU.FT
- HOUSING RATING ______ -20" H_2O
- STD. FINISH ______ EXTERIOR BLUE
- SHIPPING WEIGHT (W/O OPTIONS) ______ 350 LBS

LIST OF OPTIONS:

- CHAMBER SILENCER (W/DAMPER)
- 3 HORSEPOWER BLOWER
- ADJUSTABLE DAMPER (BLOWER)
- MAGNEHELIC GAGE
- PHOTOHELIC GAGE
- SOLID STATE CONTROL TIMER
- MANUAL PUSH BUTTON PULSE
- EXPLOSION VENT
- FILTER MEDIA
- EXPLOSION PROOF SOLENOIDS

TD 486 OPEN BOTTOM

TD-436-001

DO NOT SCALE DRAWING

D

8.10 CONCRETE BATCHING

8.10.1 Process Description[1-4]

Concrete is composed essentially of water, cement, sand (fine aggregate) and coarse aggregate. Coarse aggregate may consist of gravel, crushed stone or iron blast furnace slag. Some specialty aggregate products could be either heavyweight aggregate (of barite, magnetite, limonite, ilmenite, iron or steel) or lightweight aggregate (with sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, slag, pumice, cinders, or sintered fly ash). Concrete batching plants store, convey, measure and discharge these constituents into trucks for transport to a job site. In some cases, concrete is prepared at a building construction site or for the manufacture of concrete products such as pipes and prefabricated construction parts. Figure 8.10-1 is a generalized process diagram for concrete batching.

The raw materials can be delivered to a plant by rail, truck or barge. The cement is transferred to elevated storage silos pneumatically or by bucket elevator. The sand and coarse aggregate are transferred to elevated bins by front end loader, clam shell crane, belt conveyor, or bucket elevator. From these elevated bins, the constituents are fed by gravity or screw conveyor to weigh hoppers, which combine the proper amounts of each material.

Truck mixed (transit mixed) concrete involves approximately 75 percent of U. S. concrete batching plants. At these plants, sand, aggregate, cement and water are all gravity fed from the weigh hopper into the mixer trucks. The concrete is mixed on the way to the site where the concrete is to be poured. Central mix facilities (including shrink mixed) constitute the other one fourth of the industry. With these, concrete is mixed and then transferred to either an open bed dump truck or an agitator truck for transport to the job site. Shrink mixed concrete is concrete that is partially mixed at the central mix plant and then completely mixed in a truck mixer on the way to the job site. Dry batching, with concrete is mixed and hauled to the construction site in dry form, is seldom, if ever, used.

8.10-2 Emissions and Controls[5-7]

Emission factors for concrete batching are given in Table 8.10-1, with potential air pollutant emission points shown. Particulate matter, consisting primarily of cement dust but including some aggregate and sand dust emissions, is the only pollutant of concern. All but one of the emission points are fugitive in nature. The only point source is the transfer of cement to the silo, and this is usually vented to a fabric filter or "sock". Fugitive sources include the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate storage piles. The amount of fugitive emissions generated during the transfer of sand and aggregate depends primarily on the surface moisture content of these materials. The extent of fugitive emission control varies widely from plant to plant.

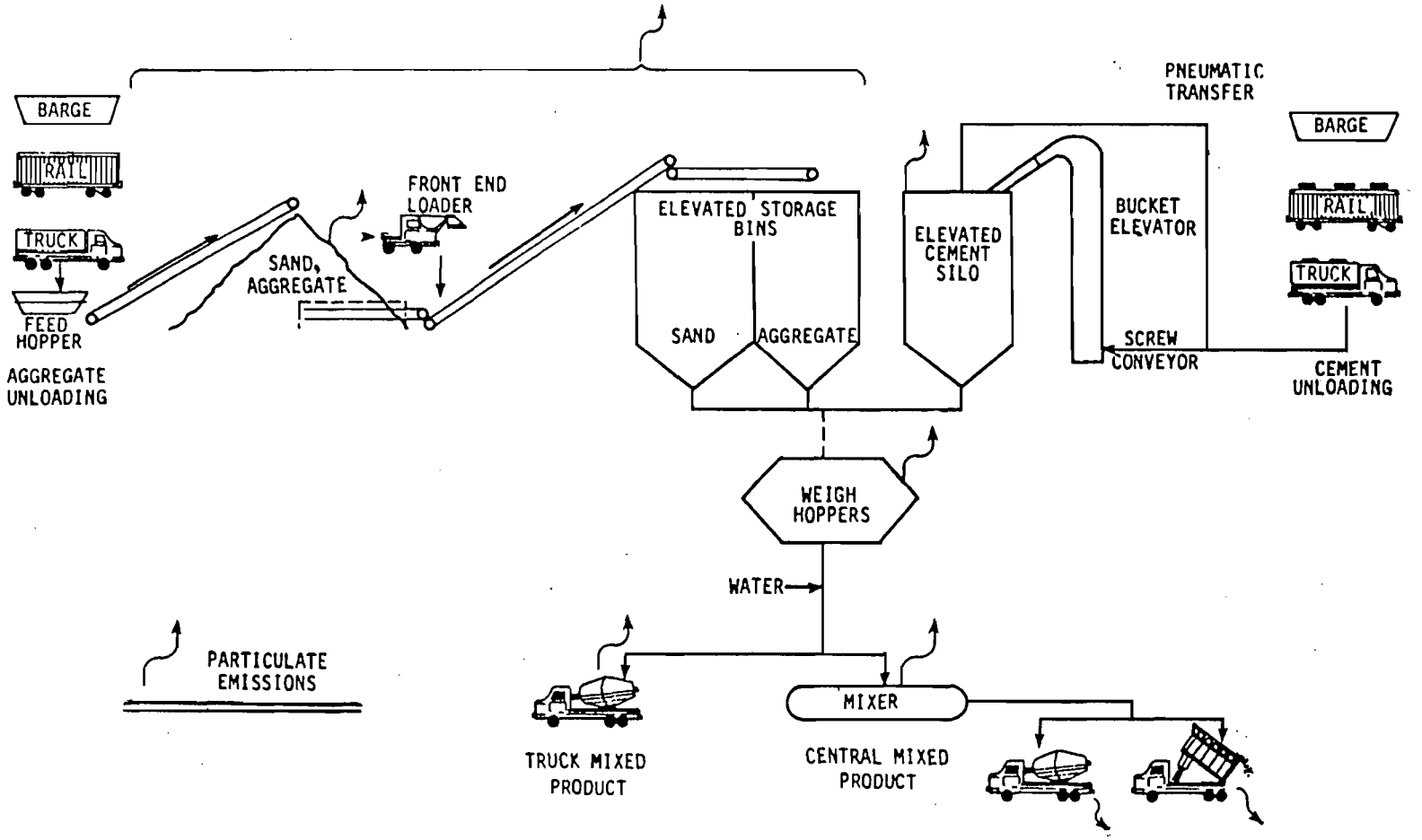


Figure 8.1-1. Typical concrete batching process.

TABLE 8.10-1. UNCONTROLLED PARTICULATE EMISSION FACTORS FOR CONCRETE BATCHING

Source	kg/Mg of material	lb/ton of material	lb/yd^3 of concrete[a]	Emission Factor Rating
Sand and aggregate transfer to elevated bin[b]	0.014	0.029	0.05	E
Cement unloading to elevated storage silo				
Pneumatic[c]	0.13	0.27	0.07	D
Bucket elevator[d]	0.12	0.24	0.06	E
Weigh hopper loading[e]	0.01	0.02	0.04	E
Truck loading (truck mix)[e]	0.01	0.02	0.04	E
Mixer loading (central mix)[e]	0.02	0.04	0.07	E
Vehicle traffic (unpaved road)[f]	4.5 kg/VKT	16 lb/VMT	0.28	C
Wind erosion from sand and aggregate storage piles[h]	3.9 kg/ hectare/day	3.5 lb/ acre/day	0.1[i]	D
Total process emissions (truck mix)[j]	0.05	0.10	0.20	E

[a]Based on a typical yd^3 weighing 1.818 kg (4,000 lb) and containing 227 kg (500 lb) cement, 564 kg (1,240 lb) sand, 864 kg (1,900 lb) coarse aggregate and 164 kg (360 lb) water.
[b]Reference 6.
[c]For uncontrolled emissions measured before filter. Based on two tests on pneumatic conveying controlled by a fabric filter.
[d]Reference 7. From test of mechanical unloading to hopper and subsequent transport of cement by enclosed bucket elevator to elevated bins with fabric socks over bin vent.
[e]Reference 5. Engineering judgement, based on observations and emission tests of similar controlled sources.
[f]From Section 11.2.1, with k = 0.8, s = 12, S = 20, W = 20, w = 14, and p = 100. VKT = vehicle kilometers traveled. VMT = vehicle miles traveled.
[g]Based on facility producing 23,100 m^3/yr (30,000 yd^3/yr), with average truck load of 6.2m^3 (8 yd^3) and plant road length of 161 meters (1/10 mile).
[h]From Section 8.19.1, for emissions <30 um for inactive storage piles.
[i]Assumes 1,011 m^2 (1/4 acre) of sand and aggregate storage at plant with production of 23,100 m^3/yr (30,000 yd^3/yr).
[j]Based on pneumatic conveying of cement at a truck mix facility. Does not include vehicle traffic or wind erosion from storage piles.