

P 256 395 198

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

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

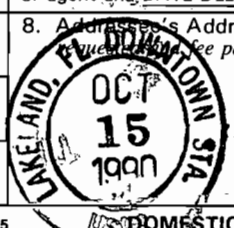
Sender's Name <i>Al Burgess</i>	Postmark or Date <i>10-12-90</i>
Street and No. <i>Sikes Corp.</i>	Postmark or Date <i>AC 53-179152</i>
P.O. State and ZIP Code <i>P.O. Box 447</i>	
Postage <i>Lakeland, FL</i>	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$

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

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

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

3. Article Addressed to: <i>Al Burgess Sikes Corp. - Fla Tile Div. P.O. Box 447 Lakeland, FL 33802</i>	4. Article Number <i>P 256 395 198</i>
5. Signature - Addressee <i>X</i>	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent <i>X J. Witherington</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery	8. Addressee's Address (ONLY if Restricted Delivery fee paid)



PS Form 3811, Apr. 1989

U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF PERMIT

Mr. Al Burgess  
Sikes Corporation - Florida Tile Division  
Post Office Box 447  
Lakeland, Florida 33802

October 11, 1990

Enclosed is Construction Permit No. AC 53-179152 for Sikes Corporation to construct a bisque grinding system at the ceramic tile manufacturing plant located at 1 Sikes Blvd. in Lakeland, 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:

Bill Thomas, SW District  
Randal Reynolds, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of buisness on 10-12-90.

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.

Kyra Deber  
Clerk

10-12-90  
Date

Final Determination

Sikes Corporation  
Florida Tile Division  
Lakeland, Polk County, Florida

Permit No. AC 53-179152  
Bisque Grinding System

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

October 8, 1990

## Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a bisque grinding system at Sikes Corporation's ceramic tile plant in Lakeland, Polk County, Florida, was distributed on August 15, 1990. The Notice of Intent to Issue was published in The Ledger on September 1, 1990. Copies of the evaluation were available for public inspection at the Department's offices in Tampa and Tallahassee.

No comments were submitted on the Department's Intent to Issue the permit. The final action of the Department will be to issue Construction Permit No. AC 53-179152 as proposed in the Technical Evaluation and Preliminary Determination.



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**  
Sikes Corporation  
Florida Tile Division  
P. O. Box 447  
Lakeland, Florida 33802

Permit Number: AC 53-179152  
Expiration Date: Dec. 31, 1990  
County: Polk  
Latitude/Longitude: 28°02'45"N  
81°57'45"W  
Project: Bisque Grinding System

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

Construct a 1,500 lb/hr bisque grinding system consisting of an apron feeder and hopper, precrusher, elevator, screen, crushed storage silo, Palla mill, whizzer separator, finish silo, main dust collector, bin vent filter, along with feeder, covers, and ducts that connect some of the process equipment to the baghouse used to control the body prep plant (AO 53-174094). This system replaces the white body bisque grinding system (AO 53-69137).

This system is located at Sikes Corporation's facility at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. The UTM coordinates of this facility are Zone 17, 405.2 km E and 3,102.4 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. Revised Application received June 28, 1990.
2. Lake Engineering letter dated July 24, 1990.

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

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

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

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

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

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

GENERAL CONDITIONS:

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

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

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

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

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

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



PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

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

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

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

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

13. The permittee shall comply with the following:

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

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

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

c. Records of monitoring information shall include:

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

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

**SPECIFIC CONDITIONS:**

1. The bisque grinding system may process up to 1,500 lbs/hr of reject tile.
2. Particulate matter emissions from the main baghouse (Ultra Ind., Inc. Model BW-64-84) shall not exceed 0.15 lbs/hr (0.3 TPY) or 5% opacity.
3. Particulate matter emissions from the bin vent shall not exceed 0.04 lbs/hr (0.08 TPY) or 5% opacity.
4. Compliance with the emission standards shall be determined by EPA Methods 5 and 9 as described in 40 CFR 60, Appendix A (July 1, 1988). The EPA Method 5 test may be waived if visible emissions are less than 5% opacity.
5. The Department's Southwest District office in Tampa shall be notified at least 15 days prior to any compliance tests.

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

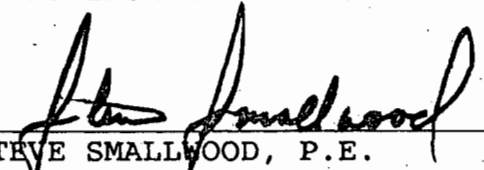
Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

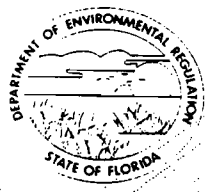
**SPECIFIC CONDITIONS:**

6. The bisque grinding system can operate 16 hrs/day, 5 days/wk, and 49 wks/yr or 3,920 hrs/yr.
7. The permittee shall maintain operation logs that can be used to show compliance with Specific Conditions Nos. 1 and 6.
8. The permittee shall take reasonable precautions to minimize fugitive emissions from this system. These precautions shall include maintaining an adequate capture velocity of the collection system for the screens and transfer points of the material handling system, sealing any leaks in the process equipment, and prompt clean up of any material spills.
9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).
10. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 11<sup>th</sup> day  
of October, 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: Clair Fancy *CF*  
DATE: October 12, 1990  
SUBJ: Approval of Construction Permit AC 53-179152  
Sikes 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 bisque grinding system at their ceramic tile manufacturing plant in Lakeland, Polk County, Florida.

No comments were received during the public notice period.

Day 90, after which this permit will be issued by default, is December 13, 1990.

I recommend your approval and signature.

CF/WH/plm

Attachments

Check Sheet

→ P 5/20

Company Name: Fla. Tile Div. of Sikes Co.  
Permit Number:  
PSD Number: A C 53-179152  
County:  
Permit Engineer:  
Others involved:

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Final Application (if applicable)
- Waiver of Department Action
- Department Response
- Other

Intent:

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

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination
- Other

Post Permit Correspondence:

- Extensions
- Amendments/Modifications
- Response from EPA
- Response from County
- Response from Park Services
- Other



Lawton Chiles  
Governor

# Florida Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

October 26, 1993

Mr. Larry G. Carlson  
Air Pollution Compliance Specialist  
Lake Engineering, Inc.  
35 Glenlake Parkway  
Suite 500  
Atlanta, Georgia 30328

Dear Mr. Carlson:

I have reviewed your proposed modeling protocol, contained in your October 20 letter to me, for compliance with the PM RACT regulations for Florida Tile Industries, Inc. I offer the following comments:

In completing the modeling, only one year of meteorological data is necessary if you use the highest predicted concentration in the maintenance area.

The receptor grid proposed for the screening level analysis is sufficient and there is no need to further refine the analysis. In fact, at the distance Florida Tile Industries is from the maintenance area, receptors only along the facing boundary of the maintenance area would be adequate.

If you have any further questions please call me at 904/488-0114 or write to me at the letterhead address.

Sincerely,

A handwritten signature in black ink that reads "Thomas G. Rogers".

Thomas G. Rogers  
Administrator

TGR/tr

cc: David Zell, FDEP, Tampa  
Preston Lewis, FDEP, Tallahassee



DIVISION OF SIKES CORPORATION

September 18, 1990

Mr. C.H. Fancy, Chief  
Bureau of Air Regulation  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Fl 32399-2400

Reference: Proposed Permit to Construct a Bisque Grinding System  
(No. AC 53-179152)

Dear Mr. Fancy:

Attached is an affidavit of publication of the Department's  
Notice of Intent to Issue the above-referenced permit. The  
notice was published in The Ledger on September 1, 1990.

Sincerely,

*Sharon Bolling*

Sharon Bolling  
Environmentalist

kg

cc: *H. Hanks*  
*B. Thomas, SW Dist*

RECEIVED

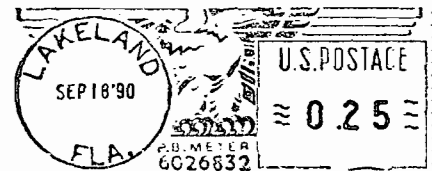
SEP 20 1990

DER-BAQM

*florida tile*



DIVISION OF SIKES CORPORATION  
FLORIDA TILE • P. O. BOX 447 • LAKELAND, FLORIDA 33802



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





# 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 .....

Grinding System .....

In the .....

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

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

Sworn to and subscribed before me this 6th  
day of September A.D. 19 1990

(Seal)

Notary Public

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

My Commission Expires  
R 423  
Bolling

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 (AC 53-179-152) to Sikes Corporation - Florida Tile Division, Post Office Box 447, Lakeland, Florida 33802, to construct a bisque grinding system which will replace the existing white body bisque grinding system of their ceramic tile manufacturing plant located at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. Air pollution from this system will be controlled by two new high efficiency bag houses along with existing air pollution control equipment. Total particulate matter emissions from the two baghouses is estimated to be 0.2 lbs/hr and 0.4 TPD. A determination of Best Available Control Technology (BACT) was not required. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. 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 2500 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 or 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 or 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 286.207, 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 2500 Blair Stone Road Tallahassee, Florida 32399-2400 Department of Environmental Regulation Southwest District 4520 Oak Fall Boulevard Tampa, Florida 33610-7347

Any person may send written comments on the proposed action to Mr. Barry Andrews of 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.  
R423 - 9-1, 1990

P 256 396 169

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

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

Serial No.	100
Speed and No.	Bursess
P. State and ZIP Code	Sikes Corp. - FTD
Postage	P.O. BOX 447
Certified Fee	Lakeland, FL
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	8-15-90
	AL 53-179152

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.

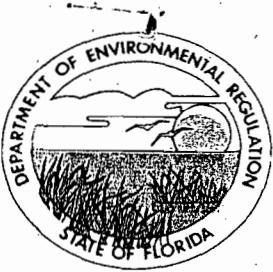
1.  Show to whom delivered, date, and addressee's address. (Extra charge)      2.  Restricted Delivery (Extra charge)

3. Article Addressed to: al Bursess Sikes Corp - Fla. Tile Div. P.O. BOX 447 Lakeland, FL 33802	4. Article Number P 256 396 169
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
6. Signature - Agent X <i>Julie Withington</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery AUG 17 1990	

PS Form 3811, Apr. 1989

U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

August 7, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Al Burgess  
Sikes Corporation - Florida Tile Division  
Post Office Box 447  
Lakeland, Florida 33802

Dear Mr. Burgess:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Sikes Corporation to construct a bisque grinding system (File No. AC 53-179152) at the existing ceramic tile plant in Lakeland, Polk County, Florida.

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

Sincerely,

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

CHF/WH/plm

Attachments

c: Bill Thomas, SW District  
Randal Reynolds, Lake Eng., Inc.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Sikes Corporation  
Florida Tile Division  
Post Office Box 447  
Lakeland, Florida 33802

DER File No. AC 53-179152

---

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, Sikes Corporation - Florida Tile Division, applied on June 28, 1990, to the Department of Environmental Regulation for a permit to construct a bisque grinding system at their existing ceramic tile plant in Lakeland, Polk County, Florida.

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

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

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

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

The Petition shall contain the following information;

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

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

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

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

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

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

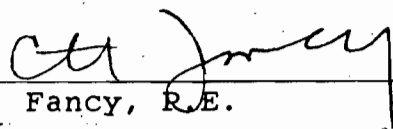
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
C. H. Fancy, R.E.  
Chief  
Bureau of Air Regulation

Copies furnished to:

Bill Thomas, SW District  
Randal Reynolds, Lake Eng., Inc.

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 8-15-90.

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.

Ken Ober  
Clerk

8-15-90  
Date

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 53-179152) to Sikes Corporation - Florida Tile Division, Post Office Box 447, Lakeland, Florida 33802, to construct a bisque grinding system which will replace the existing white body bisque grinding system at their ceramic tile manufacturing plant located at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. Air pollution from this system will be controlled by two new high efficiency baghouses along with existing air pollution control equipment. Total particulate matter emissions from the two baghouses is estimated to be 0.2 lbs/hr and 0.4 TPY. A determination of Best Available Control Technology (BACT) was not required. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. 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. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation  
and  
Preliminary Determination

Sikes Corporation  
Florida Tile Division  
Lakeland, Polk County, Florida

File No. AC 53-179152  
Bisque Grinding System

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

August 7, 1990

I. General Information

A. Applicant

Sikes Corporation  
Florida Tile Division  
Post Office Box 447  
Lakeland, Florida 33802

B. Request

On June 28, 1990, the applicant submitted a revised application for permit to construct a bisque grinding system at Florida Tile's ceramic tile manufacturing facility (SIC 3253) located at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. The application was considered complete on July 27, 1990, when Lake Engineering, Inc.'s letter dated July 24, 1990, was received.

C. Project and Location

Sikes Corporation is modernizing their ceramic tile manufacturing facility (SIC 3253) that is located at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. The UTM coordinates of this facility are Zone 17, 405.2 km E and 3,102.4 km N. This evaluation addresses an application for a new bisque grinding system that will replace the white body bisque grinding system operating under permit No. AO 53-69137.

The proposed system consists of an apron feeder and hopper, precrusher, elevator, screen, crushed storage silo, Palla mill, whizzer separator, finish silo, main dust collector, bin vent filter, along with feeder, covers, and ducts that connect some of the process equipment to the baghouse used to control the body prep plant (AO 53-174094).

D. Process and Emissions

Up to 1,500 lbs/hr of rejected tiles are transferred from the apron feeder and hopper by a belt conveyor to a precrusher. The crushed tiles are elevated to a screen. The oversized material is returned to the precrusher. The remainder of the material enters the crush storage vessels. All of the process equipment mentioned above will be vented to the dust collection system for the body preparation plant. The applicant has stated that this will not increase the particulate matter emissions from this dust collection system above the permitted rate.

Tile from the crushed storage vessel travels through a vibrating feeder, Palla mill, and whizzer separator where it is reduced to fines that are separated by the main dust collector. The fines are then transferred pneumatically from the main dust collector hopper to the finish storage vessel. From this vessel,

the fines are sent to the body preparation plant which is covered by permit No. AO 53-174094.

The particulate matter emissions are estimated to be 0.15 lbs/hr (0.3 TPY) from the main dust collector and 0.04 lbs/hr (0.08 TPY) for the bin vent filter.

The system will operate 16 hrs/day, 5 days/wk, and 49 wks/yr or 3,920 hrs/yr.

## II. Rule Applicability

The proposed project, construction of a bisque grinding system, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The plant is located in an area designated attainment for all criteria pollutants (F.A.C. Rule 17-2.420).

The project is at a major facility whose allowable particulate matter (PM) emissions exceed 100 TPY (F.A.C. Rule 17-2.100). Tile manufacturing plants are not on the list of major facility categories, Table 500-1. The increase in emissions from the proposed project is less than the significant emissions rates listed in Table 500-2.

The project is not subject to the prevention of significant deterioration (PSD) regulations (F.A.C. Rule 17-2.500) because it does not cause a significant emissions increase of any criteria pollutant.

The project is subject to F.A.C. Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. The allowable emissions will be set at the rates requested by the applicant. Higher emissions could subject this project to different regulations.

## III. Technical Evaluation

The proposed project will be a source of particulate matter emissions. All of the process equipment that may be a source of particulate matter emissions is controlled by filters having an efficiency greater than 99%. If this equipment is properly designed, installed, operated, and maintained, the bisque grinding system should comply with the Department's regulations.

## IV. Air Quality Analysis

It is the judgement of the Department that the estimated emissions from the project will not violate any ambient air quality standard.

V. Conclusion

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





# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachmann, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**  
Sikes Corporation  
Florida Tile Division  
P. O. Box 447  
Lakeland, Florida 33802

Permit Number: AC 53-179152  
Expiration Date: Dec. 31, 1990  
County: Polk  
Latitude/Longitude: 28°02'45"N  
81°57'45"W  
Project: Bisque Grinding System

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

Construct a 1,500 lb/hr bisque grinding system consisting of an apron feeder and hopper, precrusher, elevator, screen, crushed storage silo, Palla mill, whizzer separator, finish silo, main dust collector, bin vent filter, along with feeder, covers, and ducts that connect some of the process equipment to the baghouse used to control the body prep plant (AO 53-174094). This system replaces the white body bisque grinding system (AO 53-69137).

This system is located at Sikes Corporation's facility at 1 Sikes Blvd., Lakeland, Polk County, Florida 33802. The UTM coordinates of this facility are Zone 17, 405.2 km E and 3,102.4 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. Revised Application received June 28, 1990.
2. Lake Engineering letter dated July 24, 1990.

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

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

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

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

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

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



PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

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

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

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

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

13. The permittee shall comply with the following:

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

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

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

c. Records of monitoring information shall include:

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

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

**SPECIFIC CONDITIONS:**

1. The bisque grinding system may process up to 1,500 lbs/hr of reject tile.
2. Particulate matter emissions from the main baghouse (Ultra Ind., Inc. Model BW-64-84) shall not exceed 0.15 lbs/hr (0.3 TPY) or 5% opacity.
3. Particulate matter emissions from the bin vent shall not exceed 0.04 lbs/hr (0.08 TPY) or 5% opacity.
4. Compliance with the emission standards shall be determined by EPA Methods 5 and 9 as described in 40 CFR 60, Appendix A (July 1, 1988). The EPA Method 5 test may be waived if visible emissions are less than 5% opacity.
5. The Department's Southwest District office in Tampa shall be notified at least 15 days prior to any compliance tests.

PERMITTEE:  
Sikes Corporation  
Florida Tile Division

Permit Number: AC 53-179152  
Expiration Date: December 31, 1990

**SPECIFIC CONDITIONS:**

6. The bisque grinding system can operate 16 hrs/day, 5 days/wk, and 49 wks/yr or 3,920 hrs/yr.
7. The permittee shall maintain operation logs that can be used to show compliance with Specific Conditions Nos. 1 and 6.
8. The permittee shall take reasonable precautions to minimize fugitive emissions from this system. These precautions shall include maintaining an adequate capture velocity of the collection system for the screens and transfer points of the material handling system, sealing any leaks in the process equipment, and prompt clean up of any material spills.
9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).
10. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1990

**STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION**

---

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



RECEIVED

JUL 27 1990

DER - BAQM

July 24, 1990

Mr. C. H. Fancy  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: **Florida Tile Division/Sikes Corp - Bisque Grinding System**  
**DER File Number AC53-179152**

Dear Mr. Fancy:

This letter will serve as a response to clarify several items concerning the system referenced above. The items were discussed by telephone with your staff on July 16, 1990.

The ground bisque from the finished storage silo is pneumatically conveyed to the body prep. area for reuse. Emissions are minimized by use of the pneumatic conveying system.

The vibrating feeder beneath the crushed storage silo and the palla mill are closed to prevent emission releases. However, neither unit is under negative pressure. The whizzer separator is under negative pressure as well as being closed.

A question was raised concerning the estimated emissions from the main baghouse and the bin vent filter on the finished storage silo. The estimated emissions for the main baghouse are 0.135 lbs./hr. average and 0.15 lbs./hr. maximum. At 4,000 dscfm, the exit grain loading is about 0.004 gr./dscf. The bin vent filter emissions are estimated at 0.04 lbs./hr. and about 0.005 gr./dscf.

We believe that these estimated emissions and exit grain loadings are reasonable for these processes and are consistent with the configurations of the equipment. For the main baghouse, most of the ground material entering the hopper is contained in the lower section and is pneumatically conveyed to the finished storage silo. Similarly, the ground bisque enters the

Mr. C. H. Fancy  
July 24, 1990  
Page Two

finished storage silo in such a way to minimize the dust loading and exit loading to the bin vent filter. Also, the air to cloth ratio for each baghouse is conservative for each application.

If you need additional information, or have further questions, please call me at your convenience.

Sincerely,

LAKE ENGINEERING, INC.



Randal M. Reynolds, P.E.  
Project Manager

RMR:css

cc: Mr. Al Burgess  
Ms. Sharon Bolling

328.2.3.6  
\\328-90\0717fanc.11L

*exp'd: W. Hanks  
B. Thomas, SW Dist*



RECEIVED  
JUN 28 1990  
DER-BAQM

June 25, 1990

Mr. C. H. Fancy  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Re: Construction Permit Application for a Bisque Grinding System  
DER File # AC53-179152

Dear Mr. Fancy:

Enclosed for your review is an original and three copies of the revised permit application for the bisque grinding system at Florida Tile, Lakeland, Florida. This revised application is submitted according to Mr. Maier's letter dated May 15, 1990.

Please notice that various transfer points in the system are vented to the material handling system baghouse (ID Point 22) of FDER Permit No. A053-174094. The emissions estimate for this baghouse is based on an inlet loading of 2 gr/dscf and an air volume flowrate of 20,000 cfm. This equates to 343 lbs/hr. Based on the usual and customary amount of dilution air introduced into a system of this type, the inlet loading of 2 gr/dscf is still a reasonable estimate. Therefore, no increase in emissions from the baghouse is expected with the addition of the ventilation pick-up points in the bisque grinding area.

Mr. C.H. Fancy  
June 25, 1990  
Page Two

If you have any questions or need additional information, please contact me at your convenience.

Sincerely,

LAKE ENGINEERING, INC.



Randal M. Reynolds, P.E.  
Project Manager

RMR:kdf

Enclosures

cc: Mr. Bill Boakes  
Mr. Al Burgess  
Ms. Sharon Bolling

328.2.3.6

\\328-90\0625FANC.11L

cc: W. Hanks  
B. Thomas, SW Dist



STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
APPLICATION TO OPERATE/CONSTRUCT  
AIR POLLUTION SOURCES

SOURCE TYPE: Stationary, industrial  New<sup>1</sup>  Existing<sup>1</sup>

APPLICATION TYPE:  Construction  Operation  Modification

COMPANY NAME: Florida Tile Div./Sikes Corporation COUNTY: Polk

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Bisque grinding system with baghouse collection and a bin vent filter.

SOURCE LOCATION: Street 1 Sikes Blvd. City Lakeland

UTM: East \_\_\_\_\_ North \_\_\_\_\_

Latitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "N Longitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "W

APPLICANT NAME AND TITLE: Mr. William R. Boakes, V.P.-Engineering & Development

APPLICANT ADDRESS: P.O. Box 447, Lakeland, Florida 33802

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Florida Tile Div./Sikes Corp.

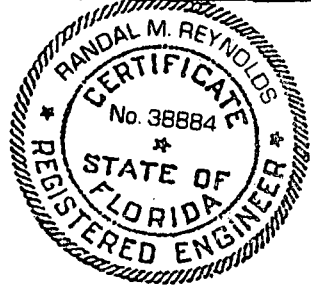
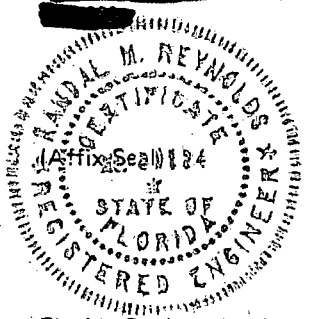
I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision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

\*Attach letter of authorization

Signed: William R. Boakes  
William R. Boakes, Vice President  
Name and Title (Please Type)  
Engineering & Development  
Date: 6/19/90 Telephone No. 813-687-7171

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 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. ~~\_\_\_\_\_~~



Signed: Randal M. Reynolds  
Randal M. Reynolds, P.E.  
Name (Please Type)  
Lake Engineering, Inc.  
Company Name (Please Type)  
6000 Lake Forrest Drive, Suite 350  
Atlanta, Georgia 30328  
Mailing Address (Please Type)  
Date: 6/12/90 Telephone No. 404-257-9634

Florida Registration No. 38884

<sup>1</sup>See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)



SECTION II: GENERAL PROJECT INFORMATION

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

This system will be used to grind reject ceramic tile for reprocessing. This system will replace the system formerly permitted under A053-69137. This source will be in compliance.

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

Start of Construction Feb. 1990 Completion of Construction June 1990

- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Equipment only: \$10,000

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

A053-69137 11/23/83 11/16/88

This is a revision to DER File No. AC53-179152. This application supercedes previous submittals.

E. Requested permitted equipment operating time: hrs/day 16; days/wk 5; wks/yr 49 ;  
if power plant, hrs/yr (NA); if seasonal, describe: (NA)

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? (NA)  
b. If yes, has "Lowest Achievable Emission Rate" been applied? (NA)  
c. If yes, list non-attainment pollutants. (NA)

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

3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No

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

a. If yes, for what pollutants? (NA)

b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

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

Description	Contaminants		Utilization Rate - lbs/hr		Relate to Flow Diagram
	Type	% Wt	Avg.	Max.	
Reject tile	particulate	< 0.1	1,350	1,500	

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

1. Total Process Input Rate (lbs/hr): avg.: 1,350; max.: 1,500

2. Product Weight (lbs/hr): (same)

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

Name of Contaminant	Emission <sup>1</sup>		Allowed <sup>2</sup> Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Average Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr.	T/yr	
Main BH particulate	0.15	0.3	(NA)	(NA)	135	265	
Bin vent particulate	0.04	0.08	(NA)	(NA)	43	84	

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

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

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

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

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

Main  
BH

Bin  
Vent

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Ultra Ind., Inc. Model BW-64-84 Unit No. BW-2485	Particulate	99.95%	10 to 100	Mfg.'s data
Griffin Env. Co. JV-24-9x SN-9079-86	Particulate	99.95	10 to 100	(best guess)

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:

Percent Sulfur: (NA) Percent Ash: (NA)  
 Density: (NA) lbs/gal Typical Percent Nitrogen: (NA)  
 Heat Capacity: (NA) BTU/lb (NA) BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

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

Annual Average (NA) Maximum (NA)

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

Collected dust is the finished product and is pneumatically conveyed to body  
prep. for reuse.

Main BH

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

Stack Height: 4 (fan outlet) ft. Stack Diameter: 11" x 12 5/8" ~~XXX~~  
 Gas Flow Rate: 4,000 ACFM (NA) DSCFM Gas Exit Temperature: (ambient) °F.  
 Water Vapor Content: (ambient) % Velocity: 69± FPS

SECTION IV: INCINERATOR INFORMATION

(NA)

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

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

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

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Bin Vent Filter

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

Stack Height: 45 ft. Stack Diameter: 5" x 8" ft.  
 Gas Flow Rate: 1,000 ACFM 1,000 DSCFM Gas Exit Temperature: 70 °F.  
 Water Vapor Content: (NA) % Velocity: 60 FPS

SECTION IV: INCINERATOR INFORMATION  
(NA)

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

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

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

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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  
(SEE FOLLOWING PAGES)

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.

## SECTION V - SUPPLEMENTAL INFORMATION

### Total Process Input Rate and Product Weight

The bisque grinding system is designed to process an average of 1,350 lbs./hr. and a maximum of 1,500 lbs./hr. rejected tile material.

### Control Device Collection Efficiency

Under normal operating conditions, a collection efficiency of 99.95% is attainable. However, for conservative estimating purposes, an efficiency of 99.9% is assumed. Manufacturer's literature is attached.

### Emission Estimate

The inlet loading to the main baghouse and hopper is an average of 1,350 lbs./hr. and a maximum of 1,500 lbs./hr. based on the whizzer separator production rate. However, an estimated 90 percent of the material entering the baghouse hopper is contained in the lower section for pneumatic conveying to the finished storage silo. Therefore the actual baghouse loading is approximately 135 lbs./hr. average and 150 lbs./hr. maximum.

$$\text{Main baghouse emissions:} \quad 0.001 \times 135 \text{ lbs./hr.} = 0.135 \text{ lbs./hr. average}$$

$$0.001 \times 150 \text{ lbs./hr.} = 0.15 \text{ lbs./hr. average}$$

The ground bisque is conveyed to the finished storage silo. A bin vent filter with a small blower provides pressure relief for the silo. An inlet dust loading of 5 gr/dscf is assumed in this application.

Inlet loading:

$$\frac{5 \text{ gr/dscf} \times 1,000 \text{ dscf/min.} \times 60 \text{ min./hr.}}{7,000 \text{ gr./lb.}} = 42.8 \text{ lbs./hr.}$$

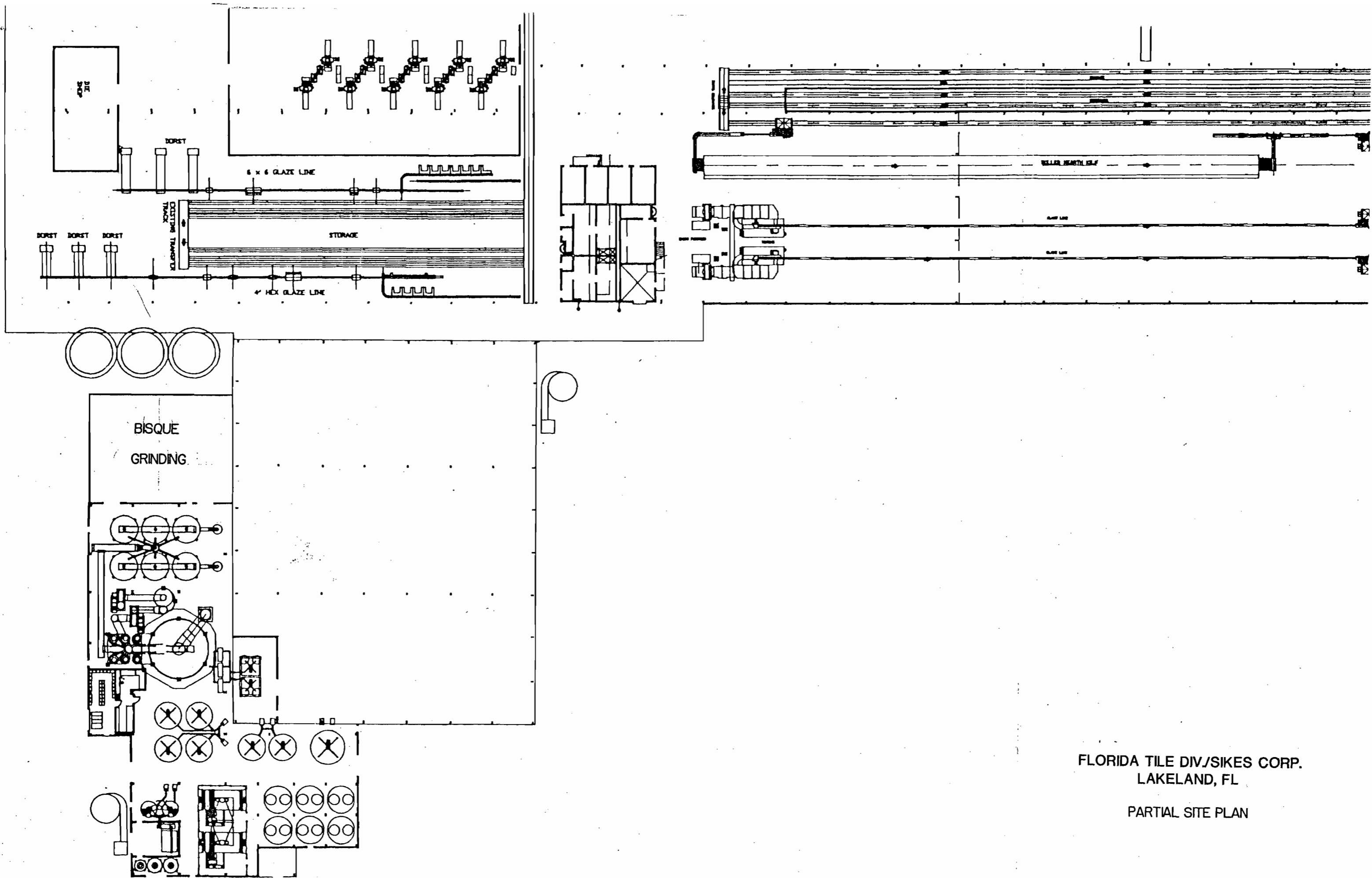
$$\text{Exit loading: } 42.8 \text{ lbs./hr.} \times (1.0 - 0.999) = 0.04 \text{ lbs./hr.}$$

$$= 0.08 \text{ tpy}$$



## DRAWINGS

\\328-90\328APP.11D

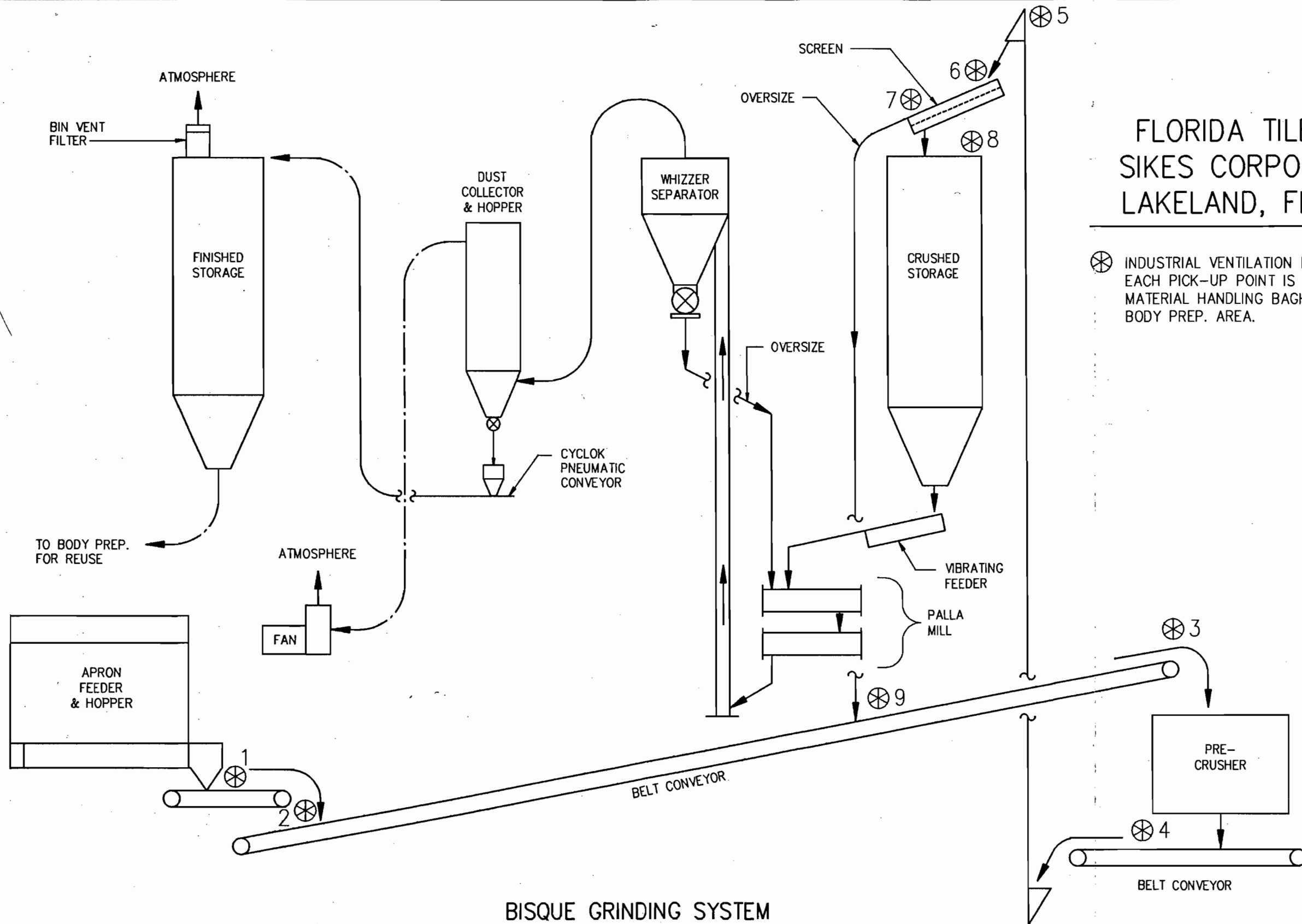


FLORIDA TILE DIV/SIKES CORP.  
LAKELAND, FL

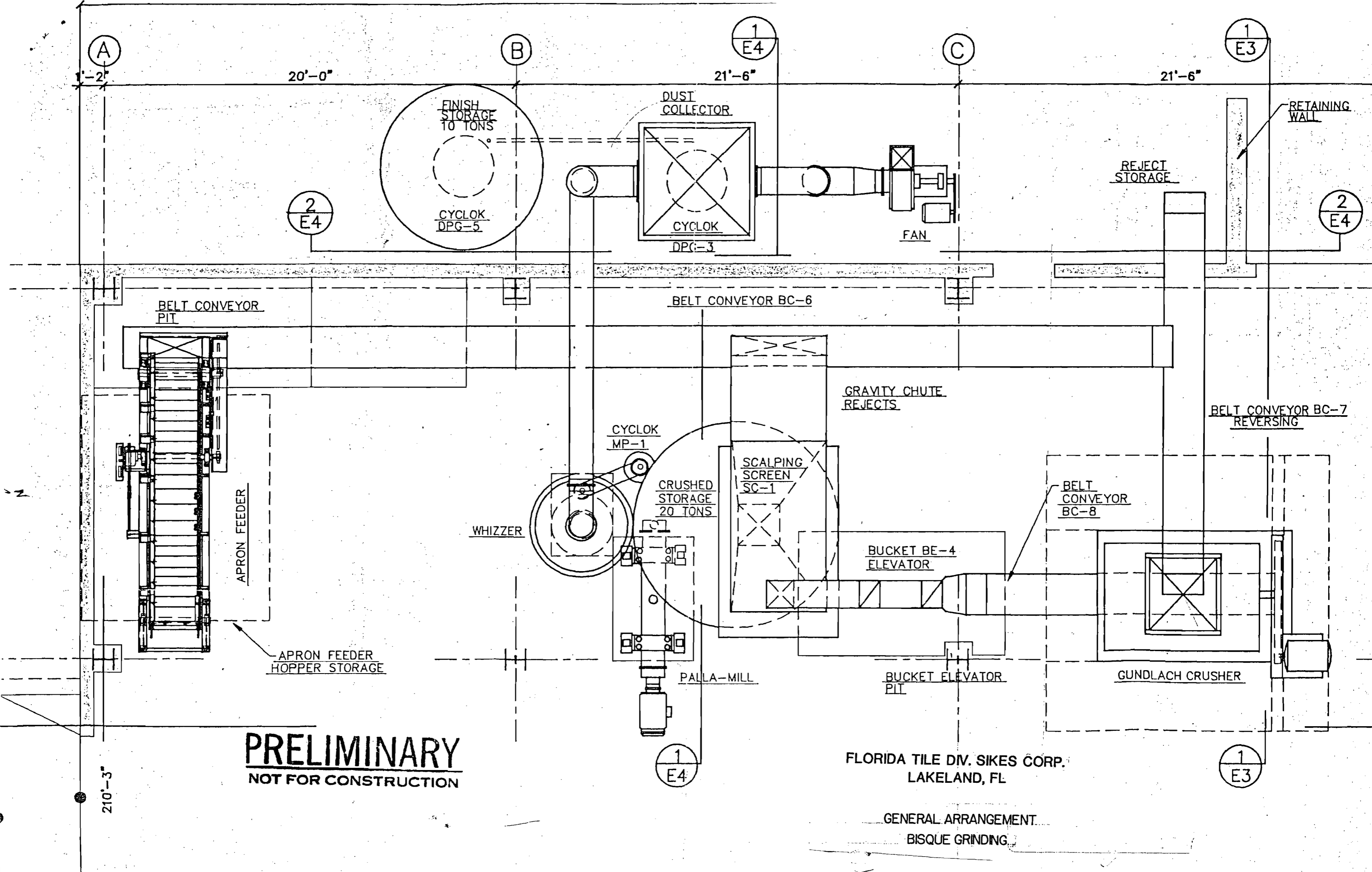
PARTIAL SITE PLAN

FLORIDA TILE DIV.  
SIKES CORPORATION  
LAKELAND, FLORIDA

⊗ INDUSTRIAL VENTILATION PICK-UP POINTS.  
EACH PICK-UP POINT IS VENTED TO THE  
MATERIAL HANDLING BAGHOUSE IN THE  
BODY PREP. AREA.



**BISQUE GRINDING SYSTEM**  
FLOW DIAGRAM  
N.T.S.



**PRELIMINARY**  
NOT FOR CONSTRUCTION

FLORIDA TILE DIV. SIKES CORP.  
LAKELAND, FL

GENERAL ARRANGEMENT  
BISQUE GRINDING

210'-3"

A

B

C

E3

2  
E4

1  
E4

1  
E3

2  
E4

1  
E4

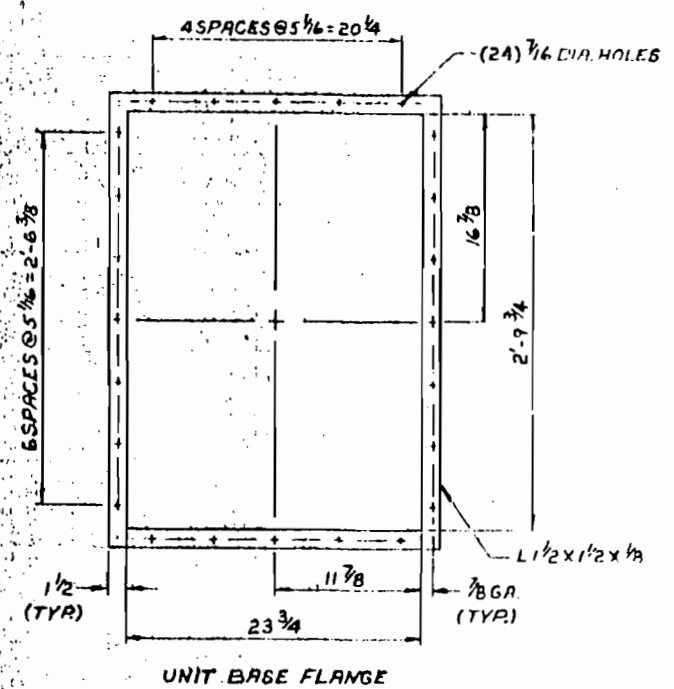
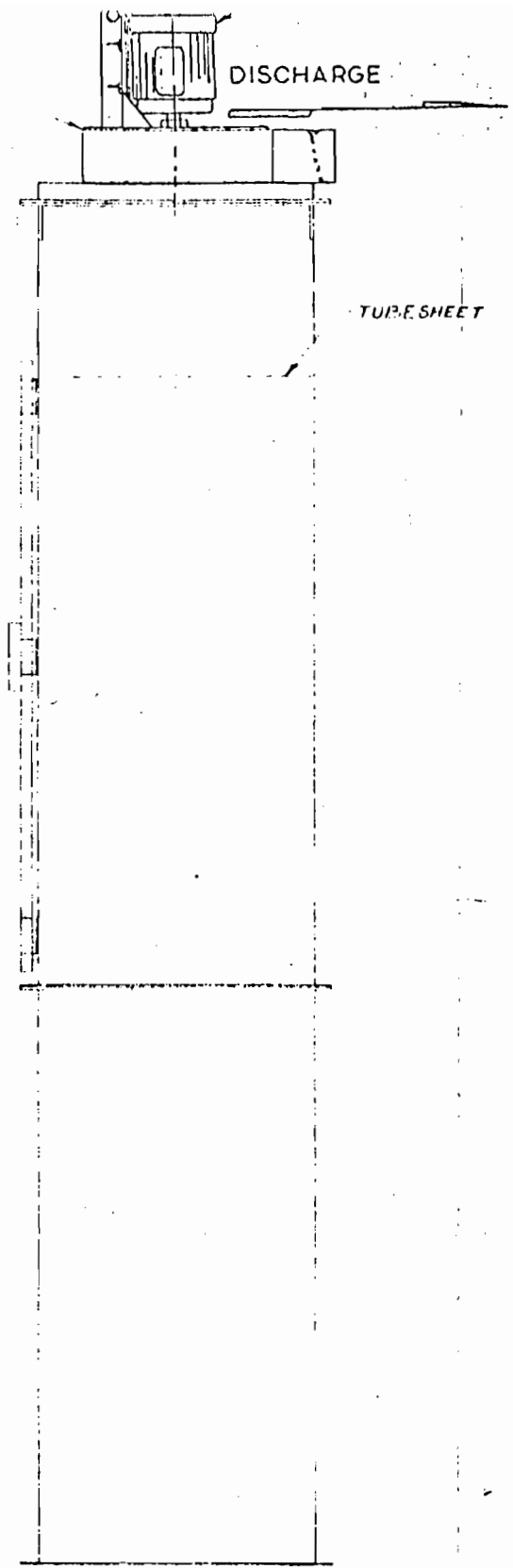
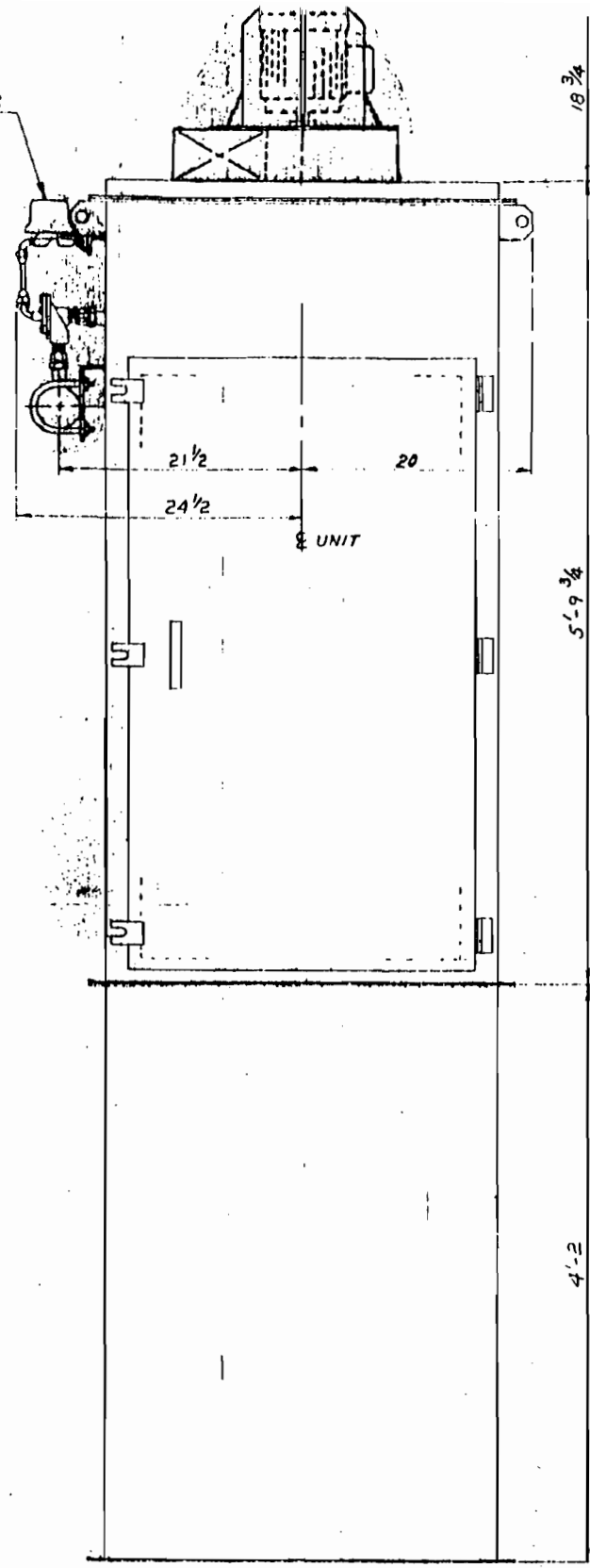
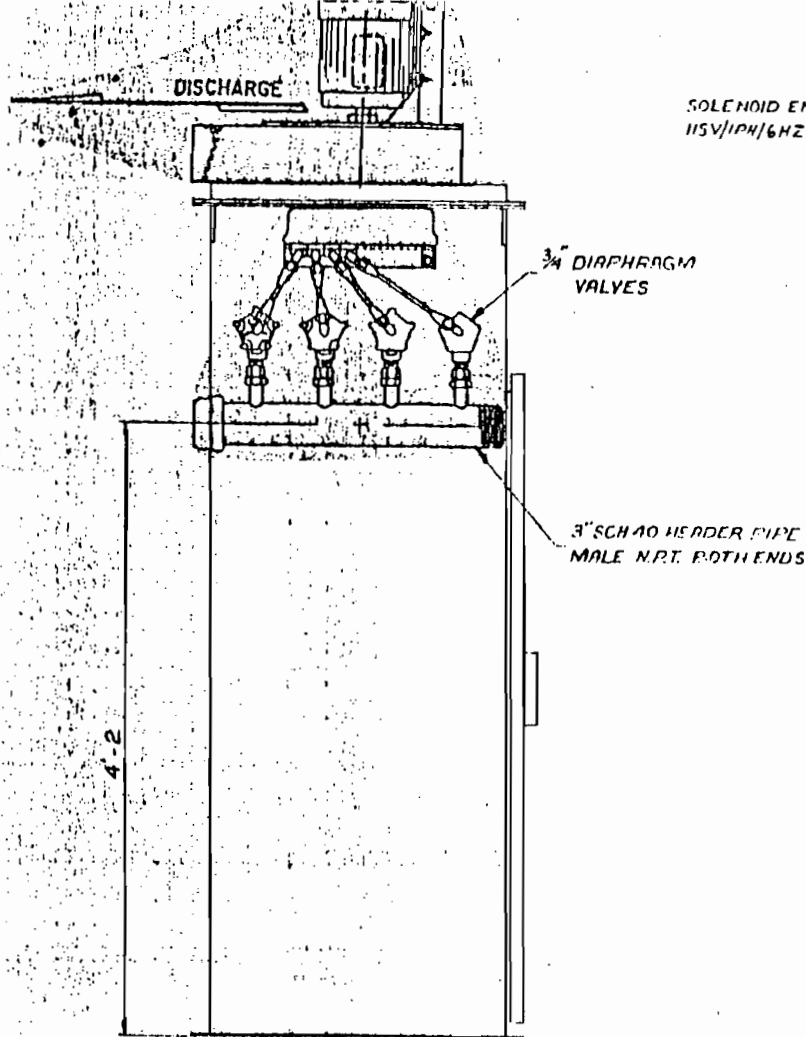
20'-0"

21'-6"

21'-6"

1'-2"

**CONTROL DEVICE  
MANUFACTURER'S DATA**



FRONT ELEVATION  
 (3) REQ'D AS SHOWN, TAG NO.'S 3-D, 5-B, 7-B/C  
 (3) REQ'D OPP HAND, TAG NO.'S 6-A

- GENERAL NOTES:
1. STANDARD UNIT DESIGNED FOR 20" OPERATING HEIGHT, PRESSURE AND 200°F MAXIMUM TEMPERATURE.
  2. UNIT SUPPLIED WITH 4 1/4" DIA. 16 OZ. ACRYLIC COATED POLYESTER FILTER BAGS AND GALVANIZED SUPPORTING CAGES.
  3. PAINTING SPEC: INTERIOR AND EXTERIOR SURFACES TO BE PAINTED WITH DERUSTO WHITE.
  4. MODEL JVCA CONTROL PANEL IS SUPPLIED WITH SOLID STATE CIRCUITRY AND ADJUSTABLE CYCLE TIMERS IN A WEATHER PROOF NEMA 4 ENCLOSURE. CONTROL VOLTAGE 115V/1PH/60. CONTROL SHIPPED LOOSE FOR REMOTE FIELD INSTALLATION AND WIRING BY OTHERS.
  5. COMPRESSED AIR REQUIREMENT: 3.6 FACFM @ 90-110 PSIG, CLEAN, DRY, OIL-FREE AIR.
  6. FOR HOPPER & SUPPORT LEGS SEE DWG. GA3-9079-V-03

SALES APPROVAL  
 JUN 24 1982

UNIT MODEL NO.	NO. OF SOLENOIDS	NO. OF FILTER BAGS	BAG DIA.	BAG LENGTH	CLOTH AREA (IN SQ. FT.)	BLOWER CFM @ 1/2 S.P.	BLOWER H.P.	DIM. "H"	WEIGHT
JV-24-9X	4	24	4 1/4	101	210	1000	5	—	815

**BIN VENT FILTER**

GRIFFIN ENVIRONMENTAL COMPANY, INC.  
 SYRACUSE, N.Y.

JET VENT DUST COLLECTOR  
 MODEL: JV-24-9X (4 BAGS)

FOR: AIR TECHNIQUES, INC.

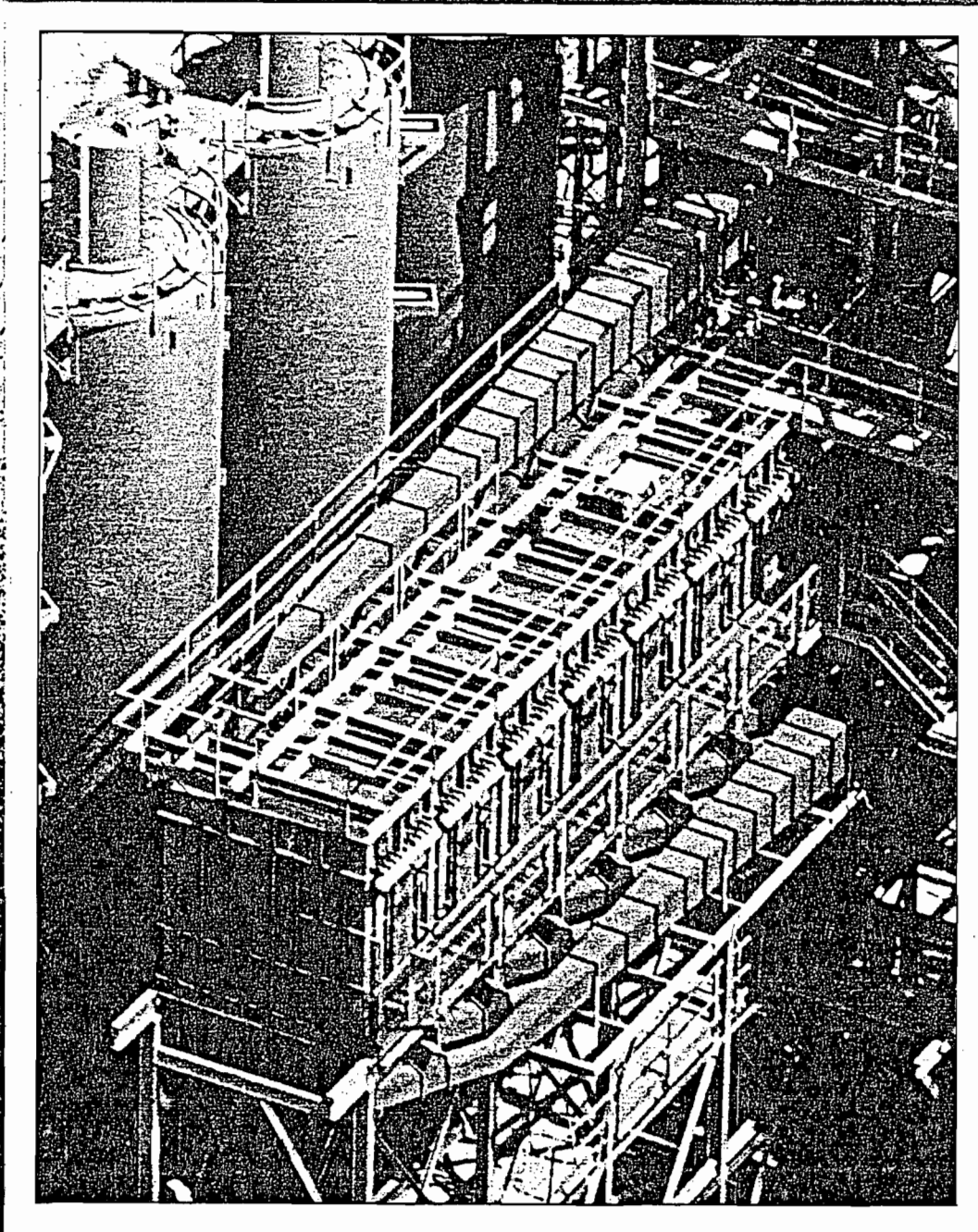
REV.	DESCRIPTION	DATE	BY	CHKD.
A	CHG. AMP	7 JUN 82	JLG	
1	REVISED			

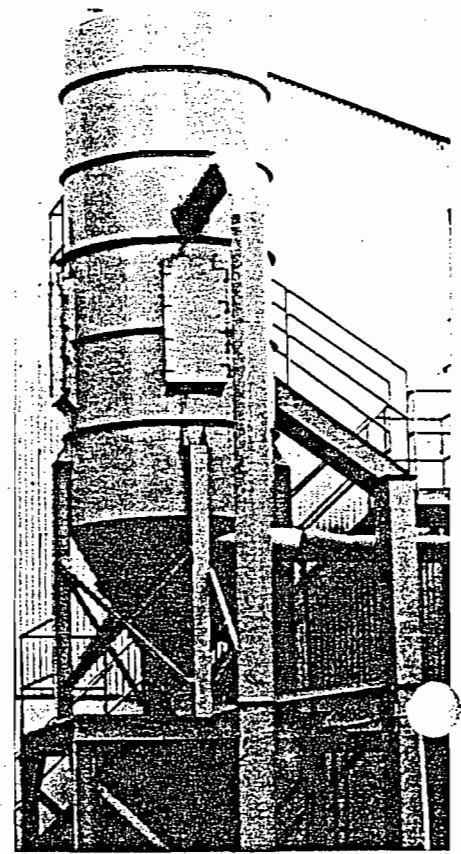
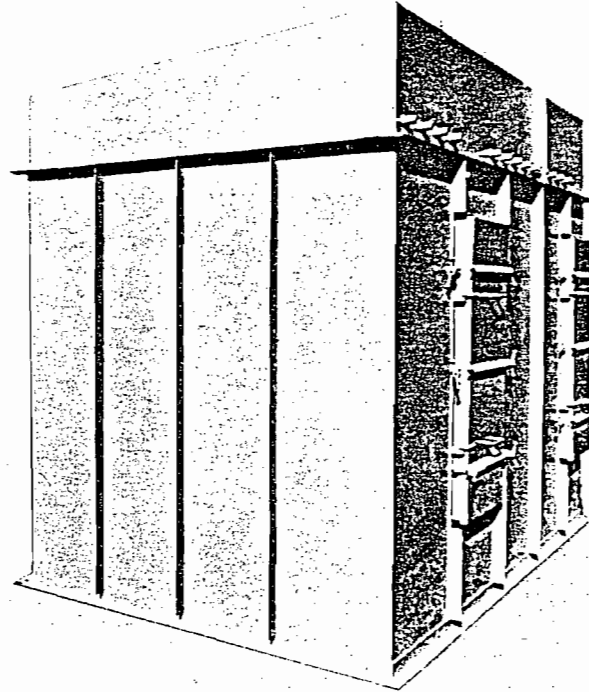
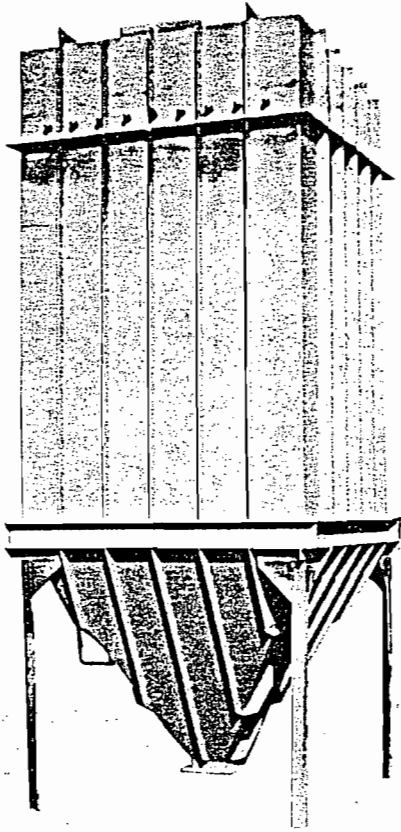
  

NOTICE	DATE	BY
9079	JLG	
6-18-86		
GA3-9079-V-03		

# ULTRA INDUSTRIES

## Pulse-Jet Dust Collectors





## A word about Ultra Industries

**Ultra Industries** was formed by a group of pulse-jet industry executives for the specific purpose of marketing an improved line of quality dust collectors backed by expert service. □ Over 70 years of experience has gone into the design of the **ULTRA-INDUSTRIES™** Collector. It features specific product improvements and incorporates the best product benefits found in the industry. □ **Ultra Industries** has an experienced staff of dust collector engineers plus a network of technical sales representatives specifically selected for their industry experience. The entire staff pledges the engineering guidance and follow-up service necessary to maintain complete on-the-job satisfaction. □ An unparalleled combination of top design, service and value establishes **Ultra Industries** as the innovative leader in the marketplace.

### Designs

Ultra Industries has designed and built dust collectors from miniature sizes to the **largest single compartment collector built to date by any manufacturer.**

Our engineering group has handled the full gamut of materials from standard and stainless steels to the exotic Incolloys. We have designed and built ASME code vessel collectors up to 30 psig pressure ratings. Our engineering experience allows us to handle virtually any design criteria.



# ULTRA INDUSTRIES

## Two bag diameters - an Ultra Industries first.

Ultra Industries is the only major manufacturer that offers a complete line of dust collectors in each of the popular bag sizes - 4½" diameter and 5¾" diameter. Twenty-six separate models and 1,842 different sizes are available, so that a collector can be selected to exactly fit your needs at the lowest cost.

## Lowest installed cost

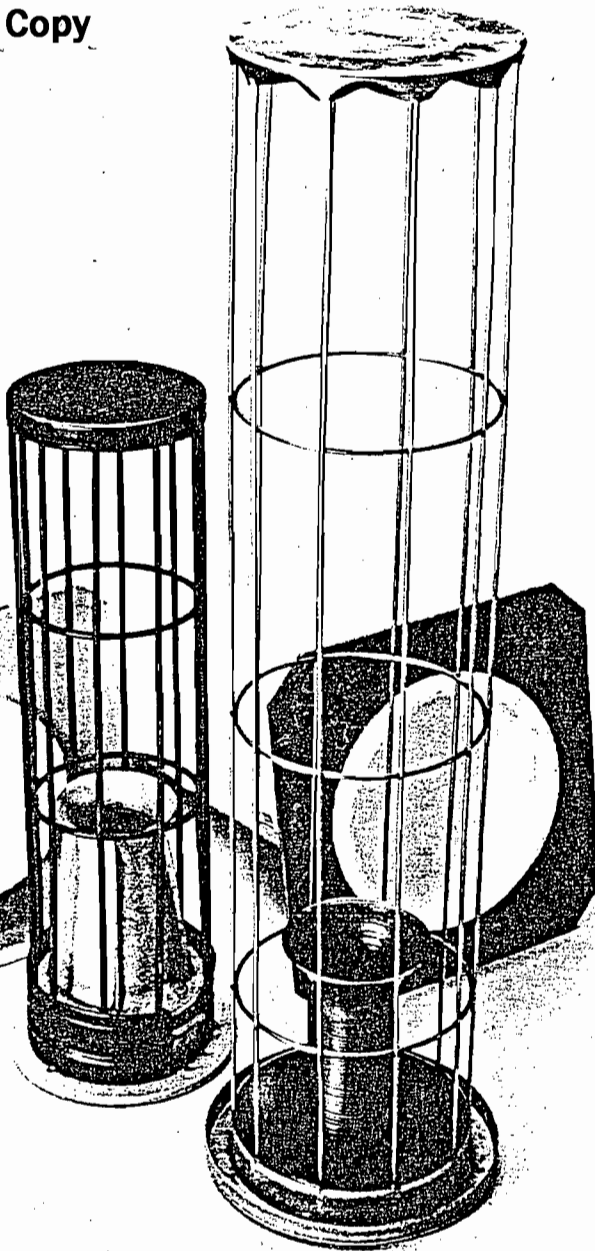
Housings are shipped completely assembled and designs selected that can save you thousands of dollars in installed cost.

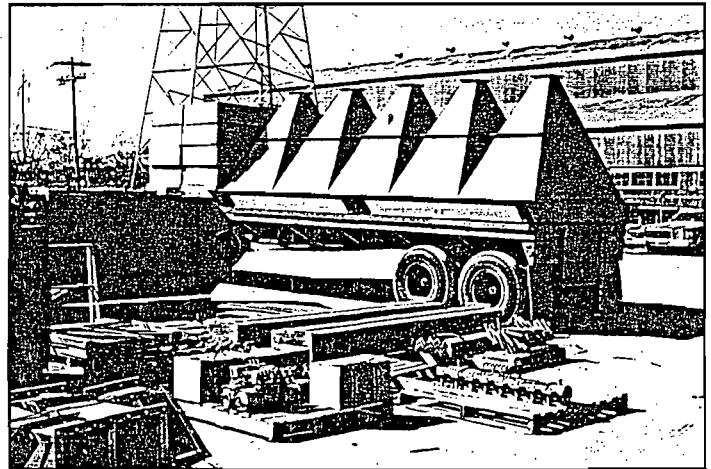
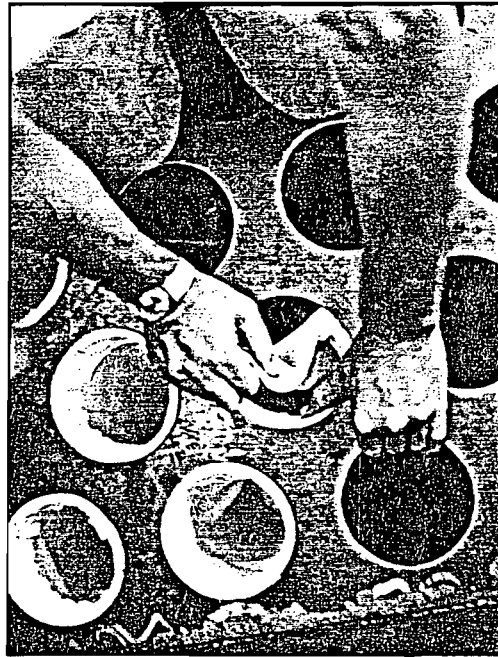
## Advanced top bag removal system

Snap-ring bags and drop-in cages, permit bags to be installed quickly and ensure leakproof seals.

## Additional features

- Easiest bag access with removable service platforms
- Minimum compressed air usage with double control, solid state timers
- Anti-plugging Magnehelic filters
- Minimum pressure drop with oversize valving
- Sanitary sloped door ledges
- Rainproof cast aluminum solenoid boxes
- Explosion venting designed to rigid NFPA standards.
- A wide selection of filter fabrics to meet your exact requirements.





**Ultra Industries Available Options:**

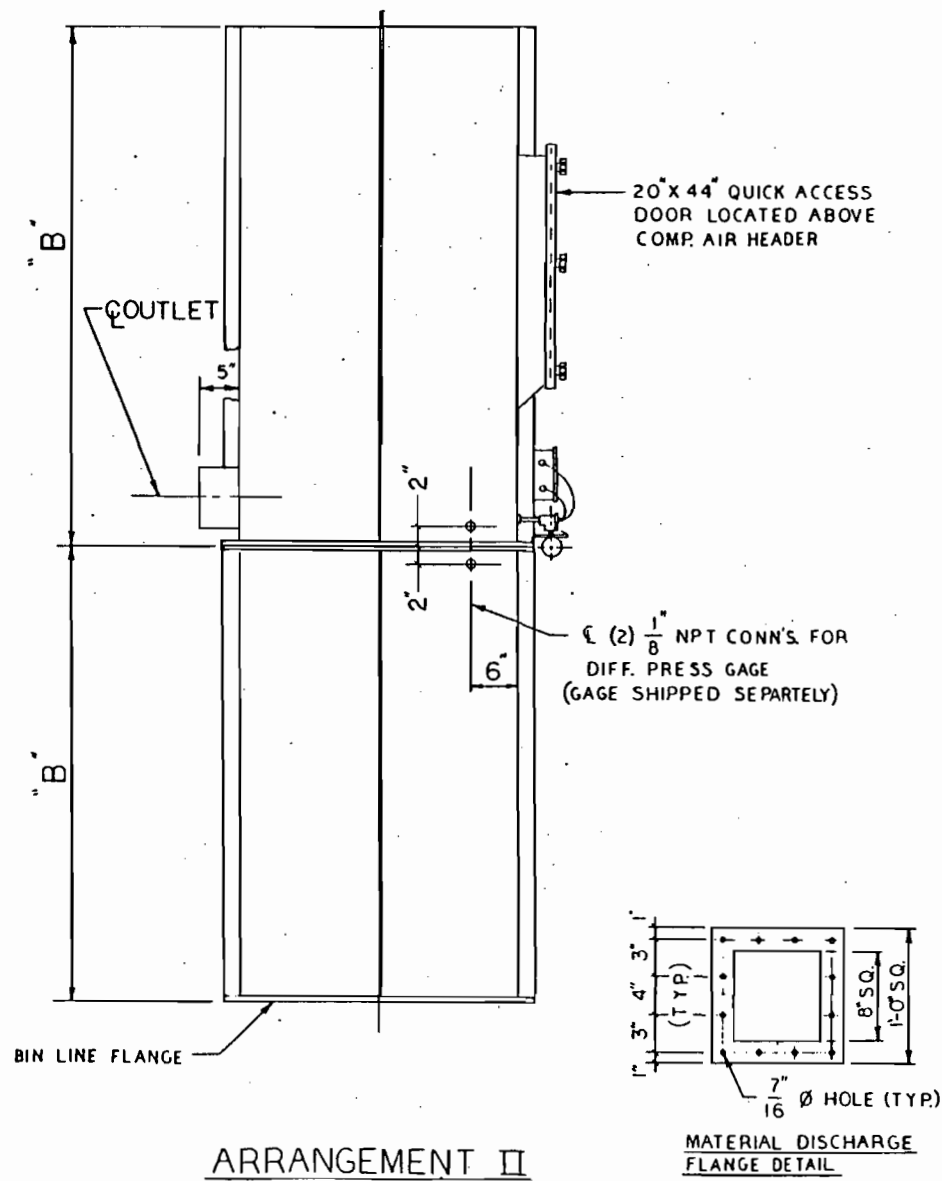
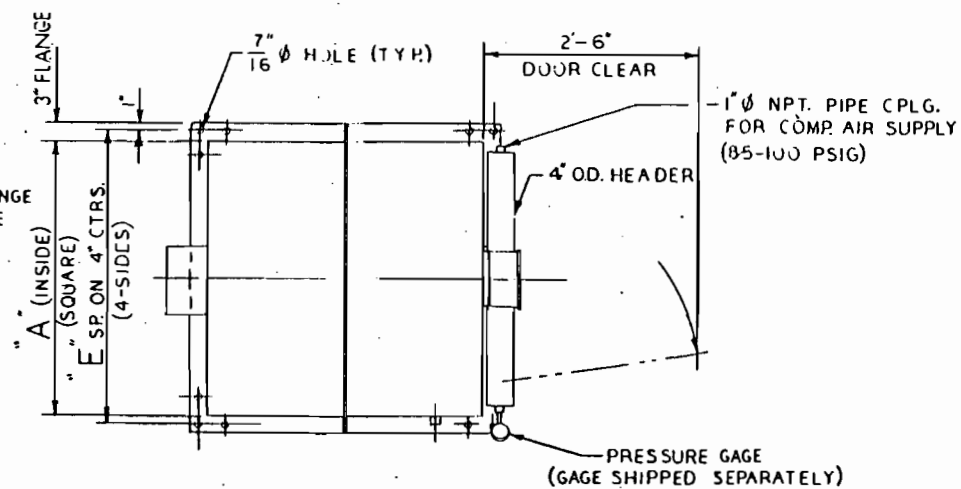
- Top removal of bags and cages
- Roof or side-mounted exhaust fan
- Protective service grid under bags
- Inlet baffle with abrasion-resistant baffle plate
- Outlet with weatherhood and birdscreen
- Explosion-proof electrical components
- Differential pressure switch... signals rise in pressure across the filter
- Structural steel support legs, ladders, access platforms

*Contact your technical representative today!*

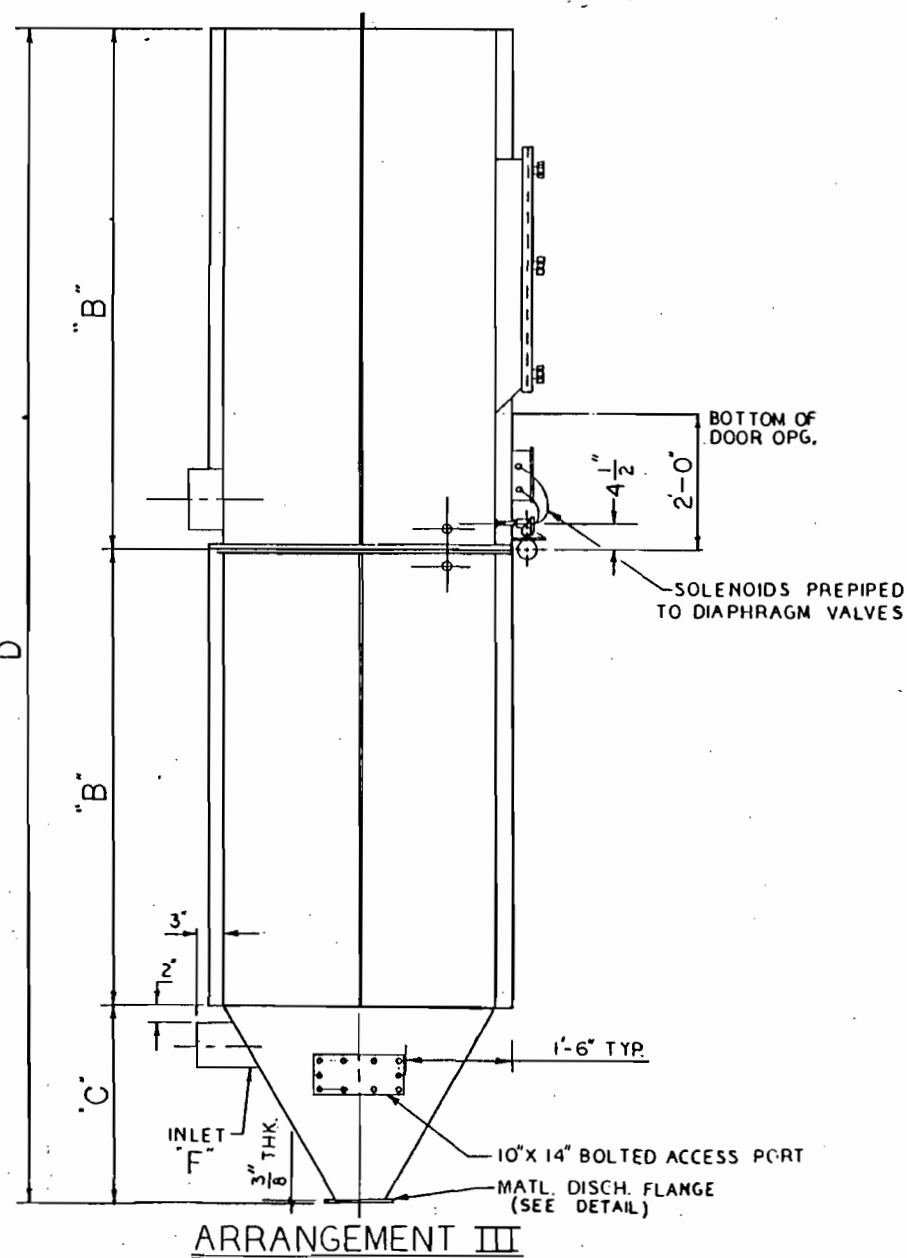
**ULTRA  
INDUSTRIES**

1010 Madison Street • Maywood, IL 60153  
(312) 450-1000

NOTE:  
TUBE SHEET FLANGE  
SAME AS BIN LINE  
FLANGE

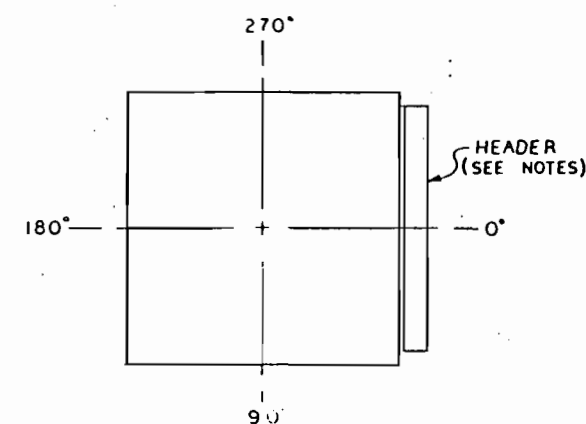


ARRANGEMENT II



ARRANGEMENT III

MODEL - BW	25 58	25 84	25 100	36 84	36 100	49 84	49 100	64 84	64 100
NUMBER OF BAGS	25	25	25	36	36	49	49	64	64
FILTER AREA (SQ.FT)	183	265	317	382	457	520	622	678	813
NUMBER OF VALVES	5	5	5	6	6	7	7	8	8
COMP. AIR REQ'D (SCFM)	5.8	7.5	7.8	8.4	8.8	9.8	10.5	12.0	12.8
A	3'-4"	3'-4"	3'-4"	4'-0"	4'-0"	4'-8"	4'-8"	5'-4"	5'-4"
B	5'-4"	7'-6"	8'-10"	7'-6"	8'-10"	7'-6"	8'-10"	7'-6"	8'-10"
C	2'-4"	2'-4"	2'-4"	2'-11"	2'-11"	3'-6"	3'-6"	4'-1"	4'-1"
D	13'-0"	17'-4"	20'-0"	17'-11"	20'-7"	18'-6"	21'-2"	19'-1"	21'-9"
E - SPACES	11	11	11	13	13	15	15	17	17
F - INLET O.D.	10"	10"	11"	12"	14"	16"	16"	18"	18"
WT. IN LBS.	ARR. II 1170	1360	1550	1740	1950	2340	2500	2850	3370
	ARR. III 1260	1450	1640	1940	2190	2560	2720	3150	3370



ORIENTATION VIEW  
(FOR LOCATION ONLY)

- NOTES
1. DRAWING IS TO BE USED FOR GENERAL ARRANGEMENT ONLY AND NOT TO BE USED FOR CONSTRUCTION.
  2. DESIGN PRESSURE IS  $\pm 17$ " W.G.
  3. ALL EXTERIOR MILD STEEL SURFACES TO HAVE (1) ONE COAT OF SHOP PRIMER.
  4. FLANGES ON INLET AND OUTLET ARE OPTIONAL.
  5. HEADER IS ALWAYS AT 0°.
  6. OUTLET CANNOT BE AT 0°.
  7. OUTLET SIZE AND LOCATION TO BE DETERMINED BY CUSTOMER.

REVISIONS			
<b>ULTRA INDUSTRIES, INC.</b> 1010 MADISON ST. MAYWOOD ILL. 60153			
SCALE: NONE	ORDER NO.	DRAWN BY: MJF	APPROVED BY:
DATE: 1-27-75			
MODEL BW		TOP BAG REMOVAL WALK IN PLENUM	
1002-B9DOA			



June 5, 1990

RECEIVED

JUN 08 1990

DER-BAQM

Mr. C. H. Fancy  
Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Reference: Construction Permit Application for a Bisque Grinding  
System with Baghouse Collection  
DER File # AC53-179152

Dear Mr. Fancy:

Florida Tile's response to Mr. Maier's letter dated May 15, 1990  
is as follows:

Response (1)

1. The bin vent on the finished product storage silo is an emission point and should have been included in the permit application. Our consultant, Lake Engineering, Inc., will submit a revised application under separate cover.
2. The screening prior to crushed storage is not an emission point. Dust collection hoods are in operation at points #6 and #7 on the revised flow diagram (attached).
3. The pre-crushing and transfer to crushed storage is not an emission point. These areas are controlled by dust collection pick-up points #3, #4, and #5 on the revised flow diagram.
4. The apron feeder and hopper transfer to the pre-crusher are not emission points. They are controlled by dust collection pick-up points #1, #2, and #3 on the revised flow diagram.
5. The crushed storage screening oversize transfer to the pre-crusher is not an emission point. It is controlled by dust collection pick-up point #9 on the revised flow diagram.

Mr. C. H. Fancy  
June 5, 1990  
Page Two

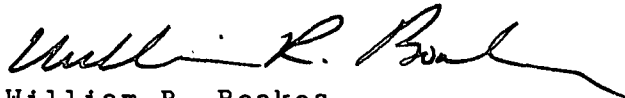
All nine of the dust collection pick-up points mentioned above are vented to the material handling system baghouse (ID point 22) of FDER Permit No. A053-174094.

Response (2)

The bin vent has been incorporated into the company's computerized preventative maintenance program which schedules routine maintenance on all emission control devices based upon the manufacturer's recommendations (attached).

If you need additional information, you may call me at (813) 687-7171 extension 274.

Very truly yours,



William R. Boakes  
Vice President  
Development & Engineering

kg

cc: Randall Reynolds, Lake Engineering

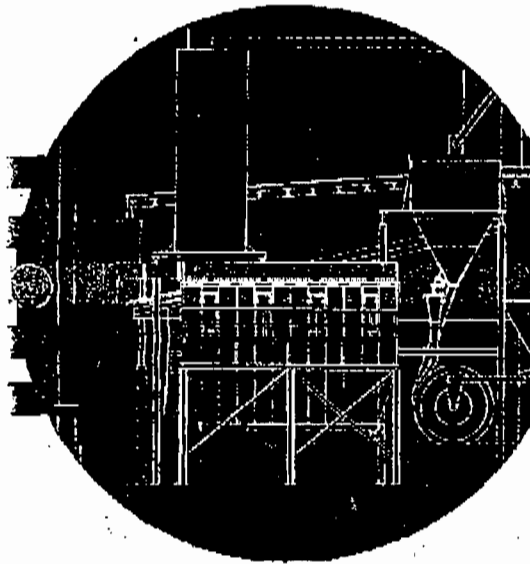
*M. Hanks*  
*B. Thomas, SW Dist.*  
*CHF/BA*

**FABRI-JET™**

**&**

**ULTRA**

**FABRIC FILTERS**



**INSTALLATION,  
OPERATION  
&  
MAINTENANCE  
MANUAL**

**ULTRA INDUSTRIES INC.**

**FABRIC FILTER DIVISION**

### IMPROPER PULSING

21. Solenoid valves not working. (See paragraph 9.)

22. Continuous air flow through diaphragm valve. (See paragraphs 7 & 8. Leak in tubing between solenoid and diaphragm valves.)

### INSUFFICIENT DUST COLLECTION (SYSTEM VOLUME TOO LOW)

23. Fan running backwards. (Correct fan rotation.)

24. High differential pressure. (See paragraphs 5 through 9, 16, 17, 18 & 19.)

25. Fan belt slippage. (Tighten or replace belts.)

26. Air short-circuiting between collection point(s) and fan. (Stop leaks.)

27. Additions to system. (Increase system capacity.)

28. System blockage. (Use proper shut-down procedure. Inspect piping for foreign material and remove. See paragraphs 9 and 15 through 19. Bags should feel soft to the hand or be replaced.)

### SHORT BAG LIFE

29. High temperature. (Bleed in ambient air and/or replace with bags of high temperature rated fabric.)

30. Chemical attack. (Contact us for recommendation.)

31. Localized wear from rubbing. (Straighten cages so that bags do not rub against each other or the collector housing. Replace bags and corroded or broken cages. Wear at air inlet may require an inlet baffle.)

### TIMER MALFUNCTION

32. "Power on" indicator light not on. (Ascertain that timer "ON-OFF" switch is on, that timer wiring is connected, and that indicator bulb is good. Inspect for blown fuse. Replace with 3 amp., 3 AG fuse. Do not use slow blow type.)

33. Solenoids skipping. (See paragraph 9.)

### UNUSUAL DIFFERENTIAL PRESSURE GAUGE READINGS

34. Unusual readings. (Inspect gauge filter, replace if plugged.) Blocked gauge tubing. (Disconnect and remove blockage. If blockage occurs frequently, install filter and replace it routinely.)

## REPLACEMENT PARTS

Your **ULTRA** and **FABRI-JET™** collectors use the finest components available. To ensure continued trouble free operation of your collector we recommend that only factory engineered components be used. The following components are suggested to be kept on hand to maintain trouble free service.

1. A spare set of filter bags and bag clamps.
2. Extra solenoid valves and diaphragm valves.
3. A spare timer board for multi-collector installations.

Our collector components can be used to maintain peak performance of collectors manufactured by Mikro Pul, Flex-Kleen and other leading manufacturers.

# OPERATING PRINCIPLES

BEST AVAILABLE COPY

FABRI-JET™ and ULTRA dust collectors remove 99.9% of dust particles quickly, efficiently. Units operate by this simple method:

Dust-laden air enters the hopper where heavier particles drop out of the air stream. Lighter particles are trapped in the air stream and rise.

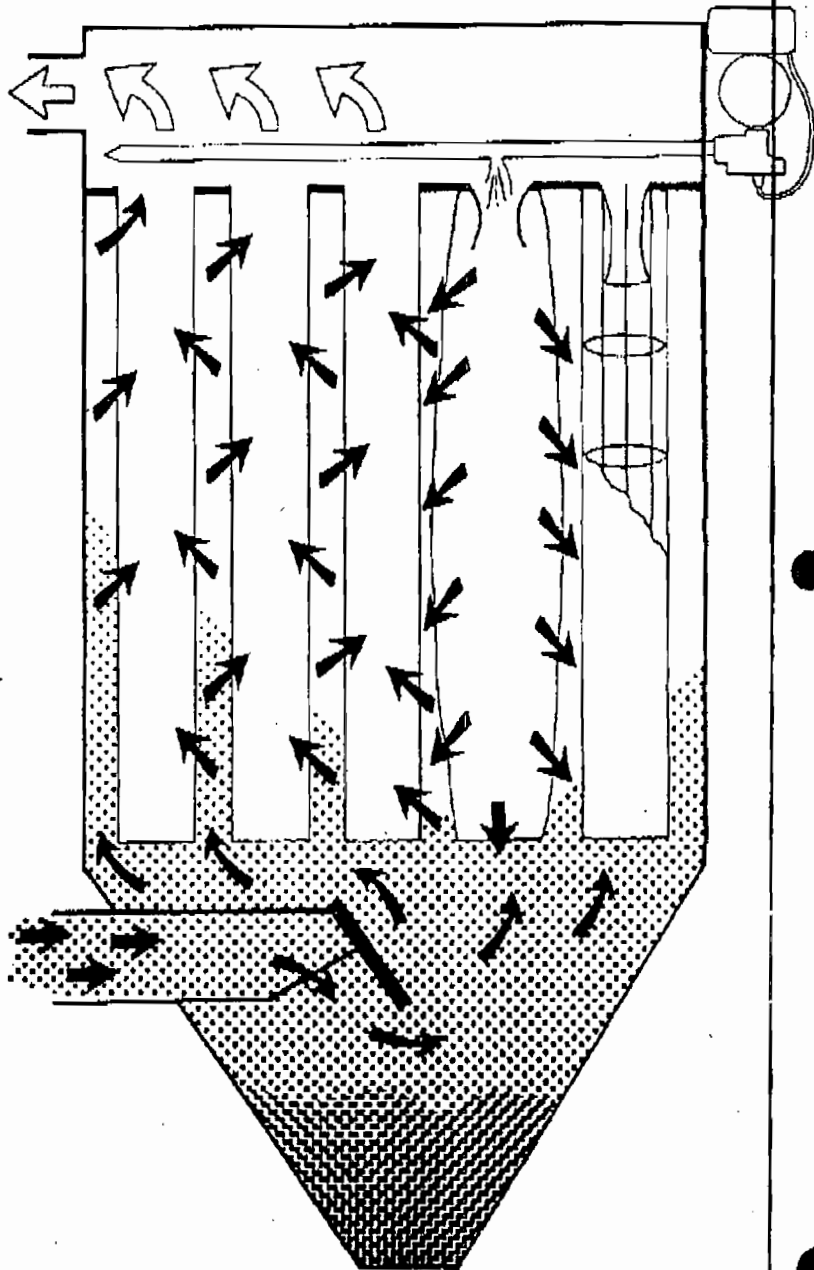
As the air passes through the filter bags, dust particles are collected on the outside surface of the filter bags and the cleaned air is exhausted from the collector.

At precise intervals, jets of high pressure air pass through the venturis, inducing a strong flow of secondary air, briefly reversing the air flow through the bags.

Shock waves pass down the inside of the bags, flexing the bags outward. The reversed air flow dislodges accumulated dust from the bag and the dust drops into the hopper.

With this method of cleaning, airflow through a row of bags is reversed for only a fraction of a second, resulting in steady airflow through the collector. The system is therefore maintained at steady-state conditions.

Collection operation is controlled by an easily-adjusted solid state timer. A Magnahelic gauge permits optimum regulation of the timer. Pulse durations and pulse intervals can be simply and accurately set at the timer to minimize air consumption.





## RECEIVING YOUR COLLECTOR

Congratulations on selecting a FABRI-JET™ or ULTRA collector for state of the art, efficient, thorough air pollution control and product recovery. We urge that you read and follow the instructions and advice which follow. We want you to be thoroughly satisfied with your collector.

### SHIPMENT

FABRI-JET™ and ULTRA collectors have been designed to minimize customer assembly. Air headers, solenoids, air piping and air pressure gauges are all shipped mounted on the collectors, completely piped for operation.

Housings for the FABRI-JET™ and ULTRA Models BB, CB, CF and SQ collectors are shipped as completely welded assemblies. Larger rectangular collectors are shipped in two subassemblies. The hopper is often inverted and nested inside the main housing. Walk-in plenums for top bag removal collectors are shipped as a separate subassembly.

Timers, bags, bag clamps, cages and differential pressure gauges are shipped separate from the collector. These shipments are carefully marked for identification.

### INSPECTION

FABRI-JET™ and ULTRA collectors are carefully inspected before shipment to ensure high quality workmanship. Heavy skids and secure truck cribbing are used but at times damages do occur during shipment. We recommend that you inspect your collector when it is received for any possible damage — If there is any damage or a shortage, it should be noted on your bill of lading. Purchaser should file claims against the carrier within a few days of receipt of the shipment. Damage incurred in transit is the responsibility of the common carrier. Since it is the manufacturer's policy to ship F.O.B. the factory, any claims must be initiated against the carrier by the purchaser.

### STORAGE

The standard finish for the outside of the collector is one coat of factory primer, unless additional finish coats or special coatings were specified.

If additional protection is required because of lengthy outside storage, corrosive atmosphere or other conditions, the collector should be given an additional protective coat while the prime coat is in good condition.

Bags and cages, which will arrive in a separate shipment to avoid shipping damage, should be stored in a dry, indoor location.

## MOUNTING THE DIFFERENTIAL PRESSURE GAUGE

**INSTALLATION** All accessories and a detailed instruction sheet are packed in the box with your gauge.

**LOCATION** Mount the gauge in a location that is free from excessive vibration and where the temperature does not exceed 140°F. Avoid direct sunlight.

**CONNECTING GAUGE** For a permanent installation it is recommended that ¼" O.D. copper tubing be used with regular compression fittings. An in-line paper filter will prevent dust from getting into the gauge line. If this is not used, it is recommended that a loop be placed in the high pressure line that leads from the dirty air housing so that dust does not enter the gauge.

Adjust the differential pressure gauge to indicate zero.

## INSTALLING THE COMPRESSED AIR CLEANING SYSTEM

**AIR CONSUMPTION** The average amount of air that is consumed is listed on the drawing for each collector. This is based on a six second pulse interval, "OFF-TIME", and a pulse duration of .05 seconds, "ON TIME", which are average settings for most applications and can be varied up or down depending on the type of dust and dust loading. For example with a very light dust loading the "OFF TIME" could be set at 12 to 18 seconds thus reducing the air requirements to ½ or ⅓ of the stated volume. A corresponding reduction in the size of the air supply piping may be made.

**AIR SUPPLY PIPING** A 1" to 2½" O.D. compressed air supply pipe furnishing 85 to 100 psig air (whether all or no other equipment on the same line is used) should be connected to the air header. Refer to RECOMMENDED PIPE SIZES table below. Higher pressures shorten bag life, lower pressures do not adequately clean the filter bags. It is good practice to blow down the air supply piping before connecting it to the air header. This removes any debris in the supply pipe before it is connected to your collector.

**AIR QUALITY** Dirt, scale, or foreign matter in the piping can cause problems of the air pulsing system. Oil in the air supply can eventually cause plugging of the bags. Water in the system can cause valve problems plus the chance of freeze-up in a cold atmosphere. It is, therefore, necessary that the air be clean, dry and oil-free. The air receiver should have an automatic moisture drain. In-line air filters with automatic drains may suffice if moisture content is not too great and if kept from freezing. However, if a large amount of moisture or oil is present, a desiccant-type filter is recommended.

### RECOMMENDED PIPE SIZES

<u>Total free air consumption</u>	<u>Up to 100 ft.</u>	<u>Up to 500 ft.</u>	<u>Up to 1,000 ft.</u>
up to 50 SCFM	1" O.D.	1¼" O.D.	1½" O.D.
51 to 100 SCFM	1¼" O.D.	1½" O.D.	2" O.D.
101 to 200 SCFM	1½" O.D.	2" O.D.	2½" O.D.

**SIDE BAG REMOVAL COLLECTORS**

1. Slip filter bag over the cage, making sure that the bag seam is not over the split in the top collar of cage. (See Fig. 1.)
2. Bottom of bag must be tight against the cage bottom, the seam should be straight and all wrinkles smoothed out.
3. Fold the top of the bag (about two inches) over the top of cage, smooth out the inside folds, and make sure that bag does not overlap the annular groove on inside of cage (trim off excess bag length if necessary). (See Fig. 2.)
4. Slip on the bag clamp (loosely). The tightening mechanism should not be over the bag seam. (See Fig. 3.)
5. Slide the bag and cage upward over the bag cup until the cage snaps into place on the groove in the bag cup. Bag and cage assembly should fit tight against tubesheet for proper alignment. (See Fig. 4.)
6. Tighten bag clamp. It is important that a  $\frac{3}{8}$ " socket be used: a screwdriver may slip and puncture the bag. (See Fig. 5.)
7. Check to make sure that bags are hanging straight, and do not touch other bags or the collector housing. (See Fig. 6.)
8. Install the remaining bags in the same manner.
9. Close and tighten all access doors.



FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6

**TOP BAG REMOVAL COLLECTORS**

1. From the top side of the tubesheet, lower the bag into the housing up to the bag cuff.
2. The bag cuff has two sewn-in steel bands. Collapse the cuff into a U-shape and lower the bag until one of the bands is below the tubesheet and one above. Then let the cuff spring back to its original shape. Smooth the cuff around the hole. The cuff should form a perfect seal at the tubesheet.
3. Lower the cage assembly into the bag and press firmly into place.
4. Install the remaining bags in the same manner.
5. Locate a blowpipe over each row of bags and connect each blowpipe to the air header by slipping the blowpipe into the coupling at the collector wall and tightening the collar.
6. Close and tighten all access doors.

## INSTALLING THE SOLID STATE TIMER

1. The **FABRI-JET™** and **ULTRA** timer is a completely solid state switching unit manufactured to rigid specifications. The timer is capable of switching up to 10 outputs at 1 amp each with 115 volts line input. Each output is capable of handling one solenoid on each air header and can handle up to six headers for a total of sixty solenoids, i.e. sixty rows of filter bags per timer.

2. The timing range is fully adjustable for optimum collector performance. The "ON TIME" (pulse duration) is adjustable from .05 seconds to .5 seconds. The "OFF TIME" (interval between pulses) can be varied from 1.5 to 30 seconds. An indicator light for "power on" is prominently located on the board as well as lights which indicate which row of bags is being cleaned. If desired, the timer can be activated by an external differential pressure switch. In this arrangement the cleaning cycle would be used only when it is necessary, as determined by a preset pressure drop across the tubesheet.

3. The standard timer is shipped in a NEMA 4, weatherproof enclosure for mounting by the customer. Other enclosures are available for hazardous applications.

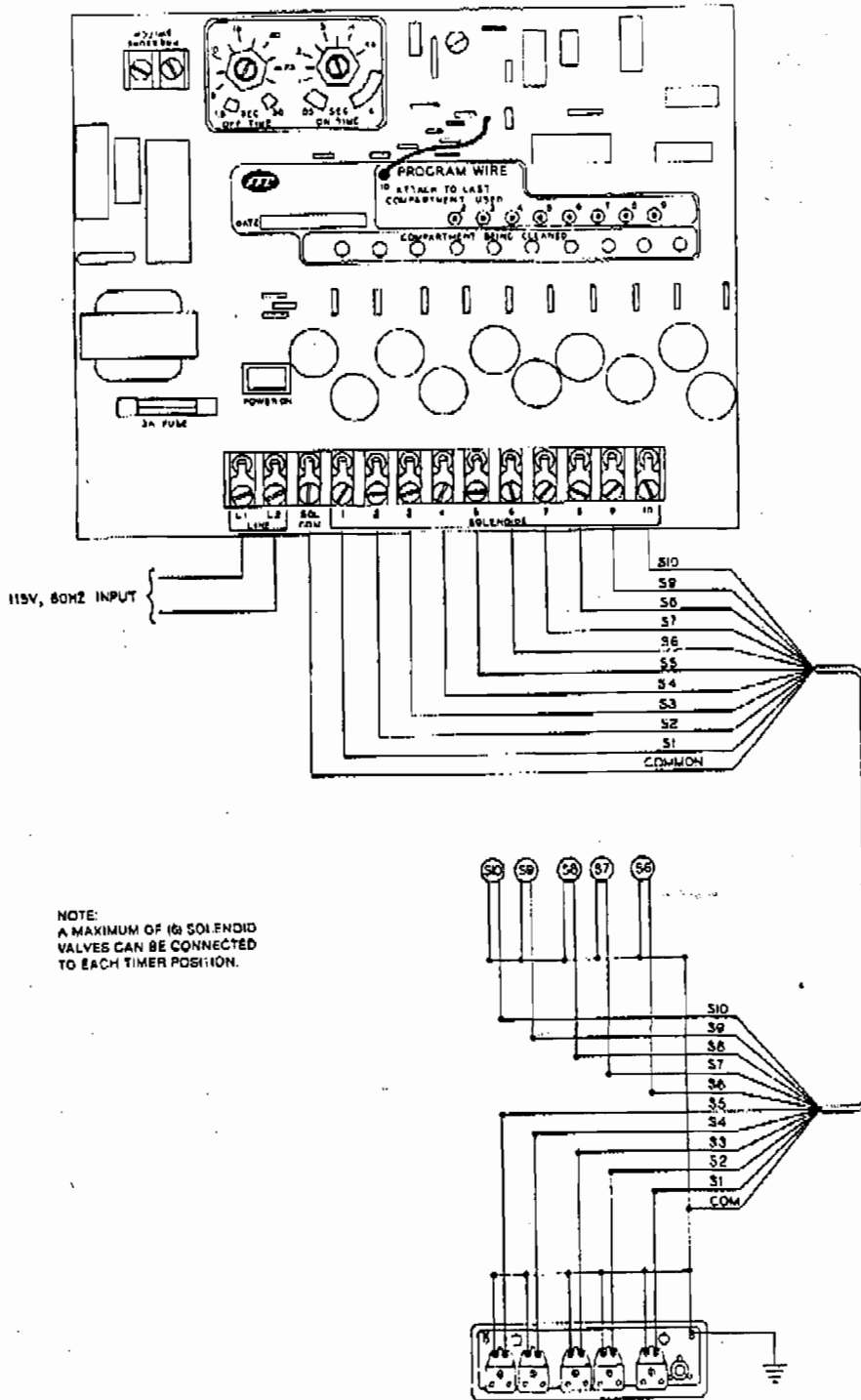
4. If the timer is to be mounted on the collector, vibration mounts should be provided. It is more desirable to mount the timer away from the collector in an accessible location that is free from vibration. The timer should not be exposed to temperatures over 120°F.

5. Install an "ON-OFF" switch in the power supply to the timer. Connect 115 volt, single phase, 60 Hz, 10 amperes input through this switch to timer terminals marked "Line L1" and "L2". In grounded systems connect neutral of line to "L2".

6. Connect wiring between the timer and solenoid valves; one side of each solenoid to the timer common terminal marked "SOL COM.", and the other side of the first solenoid to the timer output terminal marked "Solenoids 1", the second solenoid to "Solenoids 2", etc.

7. The black program wire in the timer should be connected to the "COMPARTMENT USED" socket number which is the same number as the highest numbered "Solenoids" terminal which is used. For example: If eight solenoids are connected to the timer, the program wire should be connected to the number 8 "COMPARTMENT USED" socket.

8. On collectors with more than one air header, one wire from each solenoid is connected to the timer terminal marked "SOL COM." The other wire from the first valve on each header should be connected to the timer terminal marked "Solenoids 1", the second valve on each header to "Solenoids 2", etc. On certain collectors the number of solenoid valves on each header differ. For example: a collector may have a total of 26 valves with three air headers. Two would have 9 valves, the third 8. The solenoids would be connected in sequence to the timer, with three wires on positions one through eight. On the ninth post there would be only two solenoid wires. The program wire would be connected to the ninth "COMPARTMENT USED" socket.



# INITIAL SYSTEM START UP

## AUXILIARY EQUIPMENT

Inspect all equipment before start-up to see that there are no foreign objects in rotating equipment and that safety equipment is in place.

Start the fan, screw conveyor and/or airlock and inspect for proper rotation and that all equipment runs smoothly. After making the necessary corrections turn all this equipment off.

## DUCTWORK

See that all connections are tight and that all cleanout ports are closed. The ductwork must be free of debris.

## STARTING SYSTEM

1. All doors and ports should be closed, with timer and auxiliary equipment off. Turn on compressed air to collector and inspect the system for leaks. If air is leaking from any blowpipe with the timer off there may be a leak between its solenoid and diaphragm valve. Inspect the 1/4" O D tubing between the solenoids and diaphragm valves to be certain that all connections are tight and there are no leaks. The tubing must not be crimped. Shut off compressed air supply.

2. Turn on timer. The red "power on" indicator should light. Turn "OFF TIME" and "ON TIME" knobs fully counterclockwise. The individual timing lights should blink at 1.5 second intervals and the corresponding solenoid valves will be activated (audible).

3. Turn on the air supply to the air header. All solenoid valves should be operating and the exhaust air from each valve can be felt.

Let the collector pulse for ten minutes to clear all lines then set "OFF" time to between six to ten seconds with 85 psig air supplied. Later this may be adjusted to suit your collection requirements based on the dust loading.

4. Turn on all dust discharge equipment such as rotary valves, screw conveyors, etc.

5. If water vapor or other condensables are present, it will be necessary to preheat the system so that the surface temperature of the piping and collector are above the dew point. Dryers, coolers and some grinding systems are common examples.

6. Start the fan with the fan damper set at about half-flow and run for 30 minutes because it is good practice to introduce the dust stream to a new bag at a reduced rate. This is particularly true when very fine solids (less than 2 microns) or high concentrations are present.

7. Observe the differential pressure gauge. At start-up the pressure drop will be low. After 30 minutes of operation the bags will start to be coated, the filtering efficiency will increase and the pressure differential will start to rise. Then the main fan damper should be opened to the design setting.

8. When the collector has stabilized (may require eight hours) the differential pressure should remain steady at some value between 1" and 6" W.G. If it is below 4" gradually increase the "OFF" time until it reaches 4" W.G. If it is over 4" the "OFF" time should be decreased until it reaches 4" W.G.

9. Temperature of the system must be controlled to remain below the maximum temperature capability of the filter bags.

10. The collector is now ready for use.

**STANDARD START UPS** Subsequent start ups (exception: after new bags are installed follow the **INITIAL SYSTEM START UP procedure**) should begin with all systems off. Turn on in the following sequence:

1. Filter bags installed, all ports, access doors and rotating equipment closed with safety equipment, (belt guards, etc.) in place.
2. Turn on compressed air.
3. After pressure reaches 85 psig minimum, turn on timer.
4. Turn on all dust discharge equipment.
5. Turn on main fan. Preheat system if necessary.
6. You have purchased equipment to filter 99.9% of dust particles. If the collector discharge is visible refer to the **TROUBLE SHOOTING CHECK LIST** that follows.

### SHUTTING DOWN YOUR COLLECTOR

**DUST CONTROL AND PNEUMATIC CONVEYING SYSTEMS** Reverse start-up procedure. First turn off the fan, wait five to ten minutes and turn off the timer and discharge (auxiliary) equipment.

**PROCESS SYSTEM** Dryers and the system to the collector discharge should be run until empty and heat maintained at a reduced rate until the collector metal surfaces and filter bags are dry. Then proceed as above.

### ROUTINE MAINTENANCE

**INSPECTION** Frequency will vary as widely as there are operating conditions. Your experience will be the best guide. In general proceed as follows:

1. Daily adjust timer "OFF" time to achieve differential pressure of 4" W.G.
2. Weekly check timer and solenoid valves for proper operation. Usually listening to determine that there is a uniform time interval between solenoid air discharge blasts will suffice.
3. Monthly lubricate fan, rotary valve and screw conveyor. Inspect seals on latter two for dust loss.
4. Quarterly inspect filter bags for condition and that every bag clamp is tight.
5. Inspect, clean and replace air supply and differential filters as operating conditions require.

### SAFETY Before entering dust collector:

1. Run cleaning mechanism 20 minutes with fan off to clean the filter bags.
2. Run solids out of the hopper.
3. Lock out electrical power on all rotating equipment.
4. If toxic gases and/or solids are present purge collector housing and block off inlet duct.
5. Install catwalks and safety cables.
6. Secure access doors in open position or remove doors by lifting from the hinge pins.
7. Use buddy system.
8. Wear respirator.
9. Use common sense.

## TROUBLE SHOOTING CHECK LIST

First be sure that you have used the complete STANDARD START UP procedure.

### PROBLEMS & PROBABLE CAUSES (SOLUTIONS)

#### VISIBLE EXHAUST DUST LOSS

1. Missing bag, dust loss will be constant not in synchronization with valve blasts. (Locate and replace missing bags.)
2. Improperly installed bags. Loose clamps or bag tops not clamped between cages and venturi collars. Constant dust loss. (Reinstall bags and cages properly.)
3. Holes in bags from mechanical damage during installation, abrasion, thermal or corrosive attack or wear. Generally in synchronization with valve blasts. (Replace worn or damaged bags with bags made from filter medium suitable for application. Plugging venturis with 3" diameter rubber plugs from the clean air (plenum) side of the collector is a quick temporary measure until the bags can be replaced.)
4. Dust in plenum after bags fall. (Always clean plenum before installing new bags.)

#### INSUFFICIENT AIR PRESSURE

5. Piping leaks. (Tighten fittings.)
6. Additional usage from plant system. (Revise system to furnish adequate air supply.)

#### ENTIRE ROW OF BAGS INADEQUATELY CLEANED

7. Debris in diaphragm valve.
8. Dirt in solenoid plunger. (Remove solenoid cover and clean.)
9. Solenoid valve inoperative. Electric, solenoid, or timer fault. (Establish power to solenoid and proper wiring to timer. Check solenoid and if O.K. change wiring at timer to next unused terminal and move

program wire to highest numbered terminal used or replace timer. If solenoid defective, replace.)

#### RANDOM BAG INADEQUATELY CLEANED

10. Debris in air distribution pipe hole. (Remove debris.)

#### HIGH DIFFERENTIAL PRESSURE

11. Excessive air flow. (Adjust fan damper until pressure gauge indicates proper pressure.)
12. Compressed air pressure below 75 psig. (See paragraphs 5 & 6.)
13. Solenoids skipping. (See paragraph 9.)
14. Reverse leakage through rotary valve. (Check rotary valve for wear or damage and correct.)
15. Dust on inside of bags after previous bag failure. (Clean plenum and inside of bags.) (See paragraph 4.)
16. Blinding (plugging) of bags due to condensables. (Change operations upstream so that liquids remain vaporized through unit. May be necessary to insulate the collector. Usually operating the collector with no solids flowing through will permit recovery.)
17. Re-entrainment of dust due to hopper overloading, bridging, or plugging. (Run out dust from discharge system with main fan off, consider increasing capacity of discharge system or reducing load and consider installing hopper vibrators.)
18. Improper timer sequence. (Inspect timer for proper solenoid wiring and program wire position.)
19. Defective timer. (Return timer to us for repair or replace.)
20. Bags too tight. (If bags were cleaned they may have shrunk and are too tight to permit proper flexing. Replace bags.)



RECEIVED

MAY 21 1990  
MAY 22 1990

INTER-OFFICE MEMORANDUM

DER-BAQM

TO: Clair H. Fancy, DER, Tallahassee  
THRU: J. Harry Kerns, Tampa *JK*  
FROM: Gary A. Maier, Tampa *Gary A. Maier*  
DATE: May 15, 1990  
SUBJECT: Florida Tile Division of Sikes Corp.  
AC53-179152 (Bisque Grinding System)

The above referenced application is for construction at a major facility. Pursuant to current policy, I am transferring this application to Tallahassee.

Per the recommendation of J. Harry Kerns, and because time was running short, I performed the 30 day completeness review here in Tampa. Enclosed is a copy of my incompleteness letter to the applicant. The clock has been stopped. If you have any questions, my number is Suncom 552-7612, ext 360.



# 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

May 15, 1990

**RECEIVED**  
MAY 21 1990

Mr. W.R. Boakes, Vice President  
Florida Tile Division of Sikes Corp.  
P.O. Box 447  
Lakeland, Florida 33802

**Dept. of Environmental Reg.**  
**Office of General Counsel**

Re: Construction Permit Application for a  
Bisque Grinding System with Baghouse Collection  
DER File #AC53-179152

Dear Mr. Boakes:

The Southwest District Office of the Department of Environmental Regulation has received and reviewed the above referenced Construction Permit application. Please be advised that it is incomplete until the Department receives the information requested below.

- (1) The application appears to address only the particulate emissions from the baghouse exhaust. Referring to the flow diagram, for the following "potential" particulate emission sources, please
  - A. explain why it is not a particulate emission source that should be included in the permit, OR
  - B. quantify the emissions from the particulate emission source and describe the method of particulate emission control.
  1. The stack on the finished storage silo to which the ground product is pneumatically conveyed.
  2. The screening prior to crushed storage and the transfer to the crushed storage silo.
  3. The pre-crushing and the transfer to the crushed storage screening.
  4. The apron feeder & hopper transfer to the pre-crusher.
  5. Crushed storage screening oversize transfer to the pre-crusher.
- (2) What is the proposed maintenance plan for the fabric filter baghouse?

**NOTICE!**

Pursuant to Section 120.60, F.S., and Rule 17-4.070(2), F.A.C., the Department will initiate procedures to deny this permit if you fail to provide adequate responses to this request for information within a reasonable time.

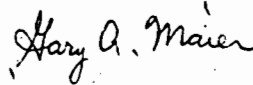
Pursuant to Section 120.60, F.S., the Department hereby suspends the processing of your permit application until receipt of the above requested information. Please be advised that the processing of this application is being transferred to the Department's Tallahassee office because it is Department policy to process all "Applications for Construction at Major Facilities" in Tallahassee, regardless of the size of the individual source.

Florida Tile Division of Sikes Corp. is hereby notified that public notice will be required for this application. The Department will draft the public notice and send it to Florida Tile for publication at a future date.

If you have any questions, you may call me at (813) 623-5561 ext. 360; however, I suggest that all future communications regarding this application be addressed directly to Mr. C. H. Fancy in Tallahassee at the address below.

Florida Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
Phone (904) 488-1344

Sincerely,



Gary A. Maier, BSChE, JD

copy to: Mr. Randal M. Reynolds, P.E.  
at Lake Engineering, Inc.  
6000 Lake Forrest Dr., Suite 350  
Atlanta, Georgia 30328



RECEIVED  
MAY 21 1990

Dept. of Environmental Reg.  
Office of General Counsel

April 3, 1990

Mr. W.C. Thomas, P.E.  
Administrator, District Air Program  
Florida Department of Environmental Regulation  
4520 Oak Fair Blvd.  
Tampa, FL 33610-7347

D. E. R.  
APR 18 1990  
SOUTHWEST DISTRICT  
TAMPA

Dear Mr. Thomas:

Enclosed is an original and three copies of an application to construct for Florida Tile Division/Sikes Corporation, Lakeland Florida. This application concerns the bisque grinding system for the Lakeland facility. Also enclosed is a check for \$200 for the application fee.

If you have any questions, please contact me at your convenience.

Sincerely,

LAKE ENGINEERING, INC.

A handwritten signature in cursive script that reads 'Randal M. Reynolds'.

Randal M. Reynolds, P.E.  
Project Manager

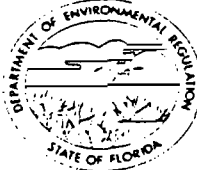
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Enclosure

cc: Mr. Bill Boakes  
Ms. Sharon Bolling

328.2.3  
U320-9010403THOM.11L

RECEIVED  
MAY 21 1990



AC53-179152

Dept. of Environmental Reg.  
Office of General Counsel

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

D. E. R.

APPLICATION TO OPERATE/CONSTRUCT  
AIR POLLUTION SOURCES

APR 18 1990

SOURCE TYPE: Stationary, industrial  New<sup>1</sup>  Existing<sup>1</sup>

SOUTHWEST DISTRICT  
TAMPA

APPLICATION TYPE:  Construction  Operation  Modification

COMPANY NAME: Florida Tile Div./Sikes Corporation COUNTY: Polk

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Bisque grinding system with baghouse collection.

SOURCE LOCATION: Street 1 Sikes Blvd. City Lakeland

UTM: East \_\_\_\_\_ North \_\_\_\_\_

Latitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "N Longitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "W

APPLICANT NAME AND TITLE: Mr. William R. Boakes, V.P.-Engineering & Development

APPLICANT ADDRESS: P.O. Box 447, Lakeland, Florida 33802

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Florida Tile Div./Sikes Corp.

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

\*Attach letter of authorization

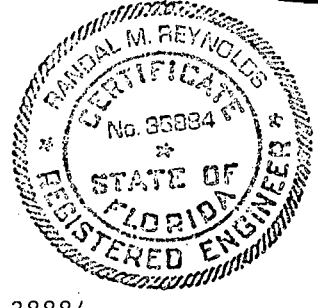
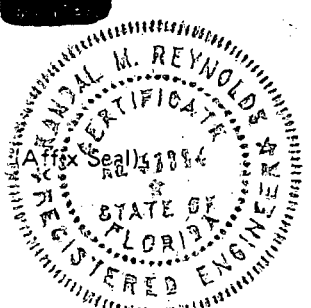
Signed: William R. Boakes

William R. Boakes, Vice President  
Name and Title (Please Type)  
Engineering & Development

Date: April 16, 1990 Telephone No. 813-687-7171

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 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 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.



Signed: Randal M. Reynolds

Randal M. Reynolds, P.E.  
Name (Please Type)

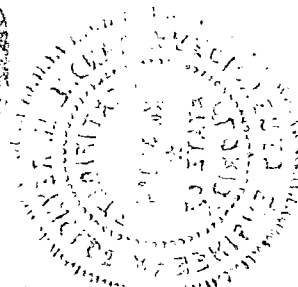
Lake Engineering, Inc.  
Company Name (Please Type)

6000 Lake Forrest Drive, Suite 350  
Atlanta, Georgia 30328  
Mailing Address (Please Type)

Date: 4/2/90 Telephone No. 404-257-9634

Florida Registration No. 38884

<sup>1</sup>See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)



TO: Alvina Krug

FROM: Harry Kerns

DATE: April 18, 90

SUBJECT: Air Permit Application Florida Tile Division/Sikes Corp  
Bisque Grinding Systems

Fee submitted is: correct (  ), incorrect (  )  
Correct fee should be \$ \_\_\_\_\_

Sub Type 1B

Comments: AC  
\_\_\_\_\_  
\_\_\_\_\_

SECTION II: GENERAL PROJECT INFORMATION

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

This system will be used to grind reject ceramic tile for reprocessing. This system will replace the system formerly permitted under A053-69137. This source will be in compliance.

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

Start of Construction Feb. 1990 Completion of Construction June 1990

- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Equipment only: \$10,000

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

A053-69137      11/23/83      11/16/88

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

№ 154001

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Sikes Corporation Date 4/18/90  
Address PO Box 447 / Lakeland, FL 33802 Dollars \$ 200.<sup>00</sup>  
Applicant Name & Address Same  
Source of Revenue Bisque grinding system  
Revenue Code 001031 Application Number AC53-179152  
ck # 014527 By Stacy Middaugh



E. Requested permitted equipment operating time: hrs/day 16; days/wk 5; wks/yr 49;  
if power plant, hrs/yr (NA); if seasonal, describe: (NA)

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? (NA)
  - b. If yes, has "Lowest Achievable Emission Rate" been applied? (NA)
  - c. If yes, list non-attainment pollutants. (NA)
- 2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. No
- 3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? No
- 5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No

- H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? No
- a. If yes, for what pollutants? (NA)
  - b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

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

Description	Contaminants		Utilization Rate - lbs/hr		Relate to Flow Diagram
	Type	% Wt	Avg.	Max.	
Reject tile	particulate	< 0.1	8,000	20,000	

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

1. Total Process Input Rate (lbs/hr): avg.: 8,000; max.: 20,000

2. Product Weight (lbs/hr): (same)

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

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup> Rate per Rule 17-2	Allowable Emission <sup>3</sup> lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr.	T/yr	
particulate	0.10	0.2	(NA)	(NA)	103	200	

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

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

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

<sup>4</sup>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)
Ultra Ind., Inc.	Particulate	99.95%	10 to 100	Mfg.'s data
Model BW-64-84				
Unit No. BW-2485				

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:

Percent Sulfur: (NA) Percent Ash: (NA)  
 Density: (NA) lbs/gal Typical Percent Nitrogen: (NA)  
 Heat Capacity: (NA) BTU/lb (NA) BTU/gal  
 Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

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

Annual Average (NA) Maximum (NA)

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

Collected dust is the finished product and is pneumatically conveyed to body prep. for reuse.

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

Stack Height: 4 (fan outlet) ft. Stack Diameter: 11" x 12 5/8" ~~XXX~~  
 Gas Flow Rate: 4,000 ACFM (NA) DSCFM Gas Exit Temperature: (ambient) °F.  
 Water Vapor Content: (ambient) % Velocity: 69± FPS

SECTION IV: INCINERATOR INFORMATION  
(NA)

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste \_\_\_\_\_  
 Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_  
 Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_  
 Manufacturer \_\_\_\_\_  
 Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

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

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_  
 Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*IF 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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  
(SEE FOLLOWING PAGES)

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.

## SECTION V - SUPPLEMENTAL INFORMATION

### Total Process Input Rate and Product Weight

The bisque grinding system is designed to process an average of 4 tons/hr and a maximum of 10 tons/hr. rejected tile material.

### Control Device Collection Efficiency

Under normal operating conditions, a collection efficiency of 99.95% is attainable. However, for conservative estimating purposes, and efficiency of 99.9% is assumed. Manufacturer's literature is attached.

### Emission Estimate

An inlet dust loading of 3 gr/dscf is assumed in this application.

Inlet loading:	3 gr	4,000 dscf	lb	60 min
	dscf	min	7,000 gr	hr

$$= 102.8 \text{ lbs/hr}$$

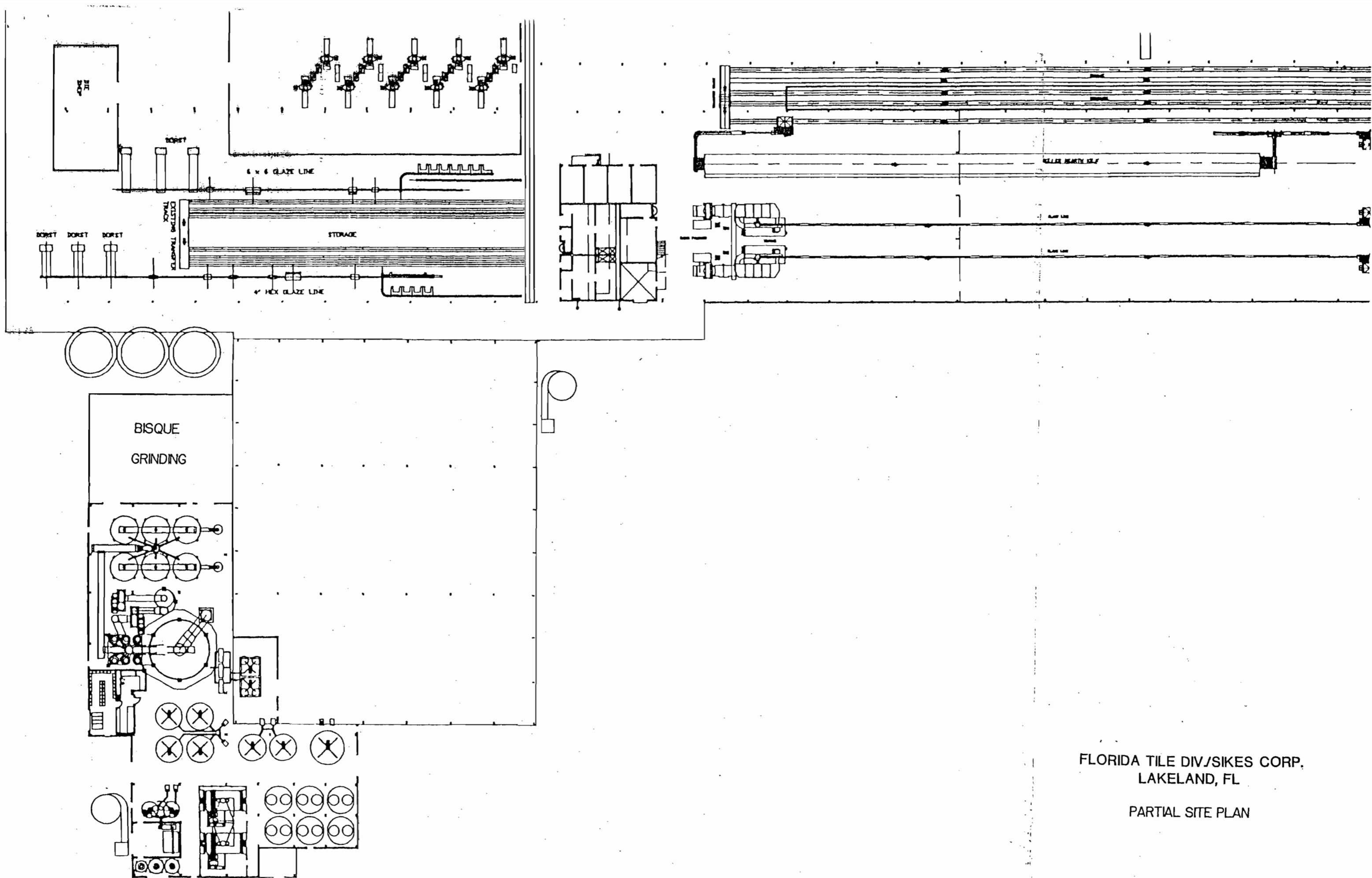
$$= 200.0 \text{ tpy}$$

$$\text{Exit loading: } 102.8 \text{ lbs/hr} \times (1.0 - 0.999) = 0.10 \text{ lbs/hr}$$

Operating schedule: 16 hrs/day  
5 days/wk.  
49 wks/yr.

$$\text{Annual emissions: } \frac{0.10 \times 16 \times 5 \times 49}{2,000} = 0.2 \text{ tpy}$$

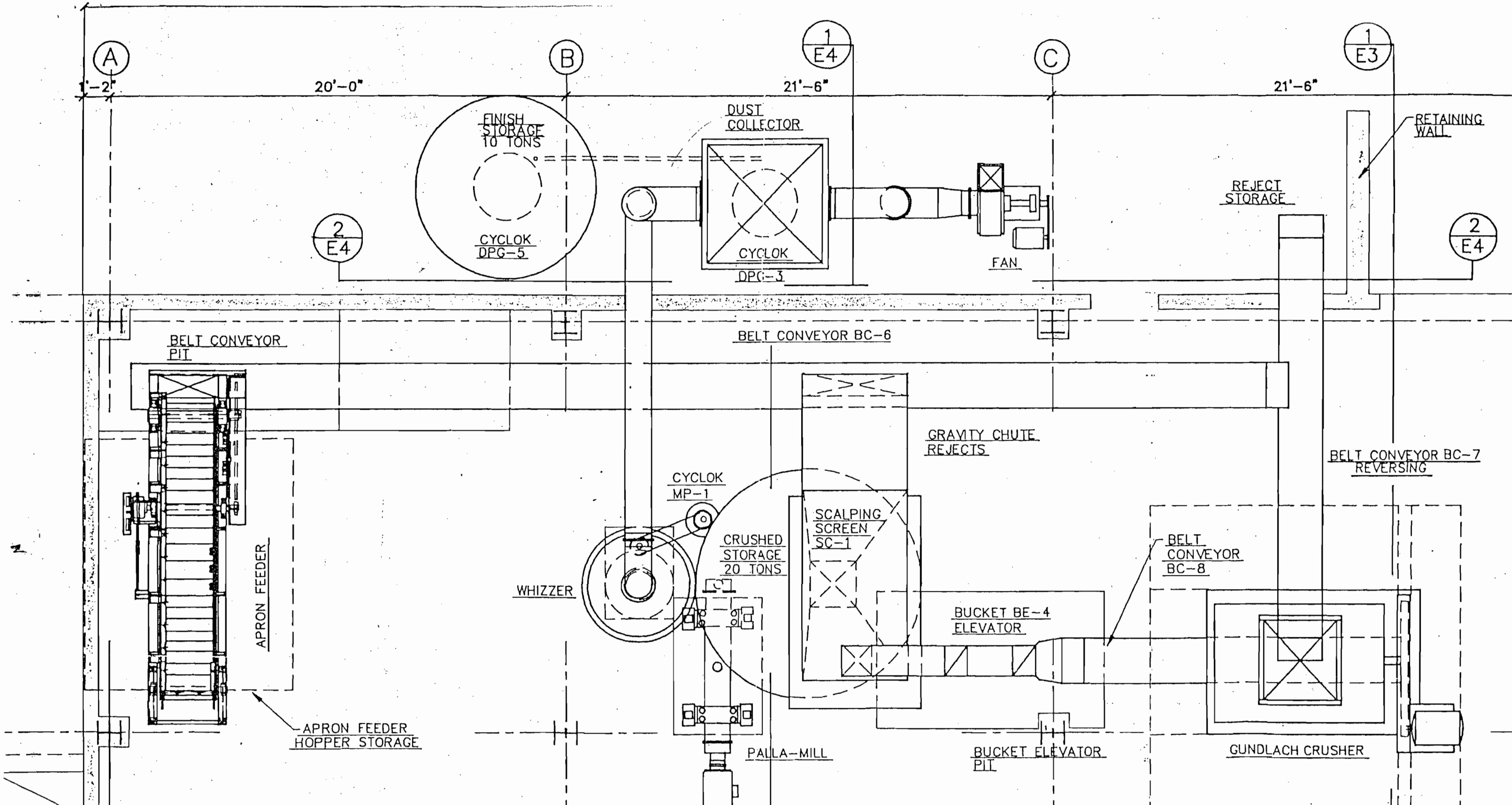
## **DRAWINGS**



FLORIDA TILE DIV/SIKES CORP.  
LAKELAND, FL

PARTIAL SITE PLAN





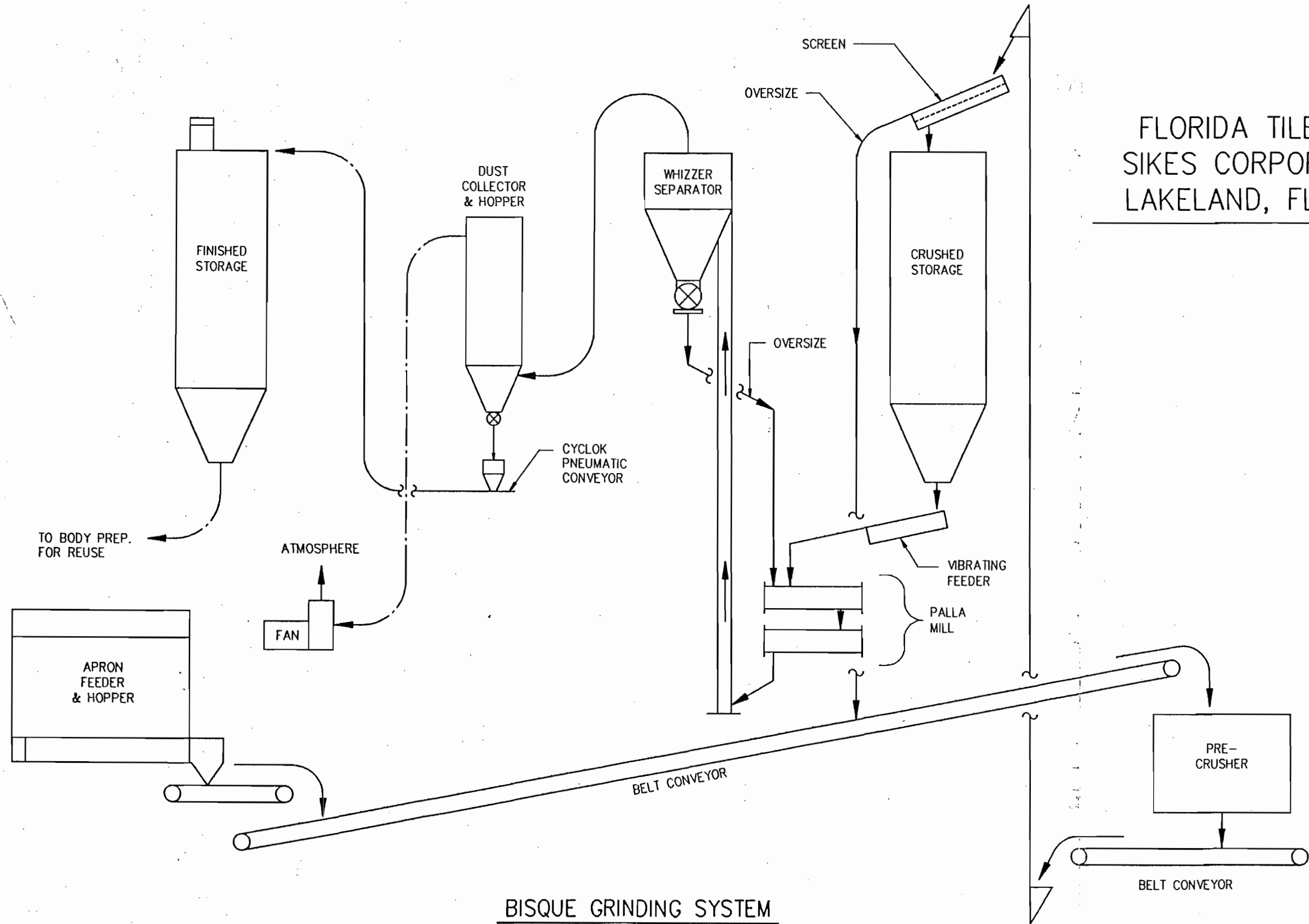
**PRELIMINARY**  
NOT FOR CONSTRUCTION

FLORIDA TILE DIV. SIKES CORP.  
LAKELAND, FL

GENERAL ARRANGEMENT  
BISQUE GRINDING.

210'-3"

FLORIDA TILE DIV.  
SIKES CORPORATION  
LAKELAND, FLORIDA



**BISQUE GRINDING SYSTEM**

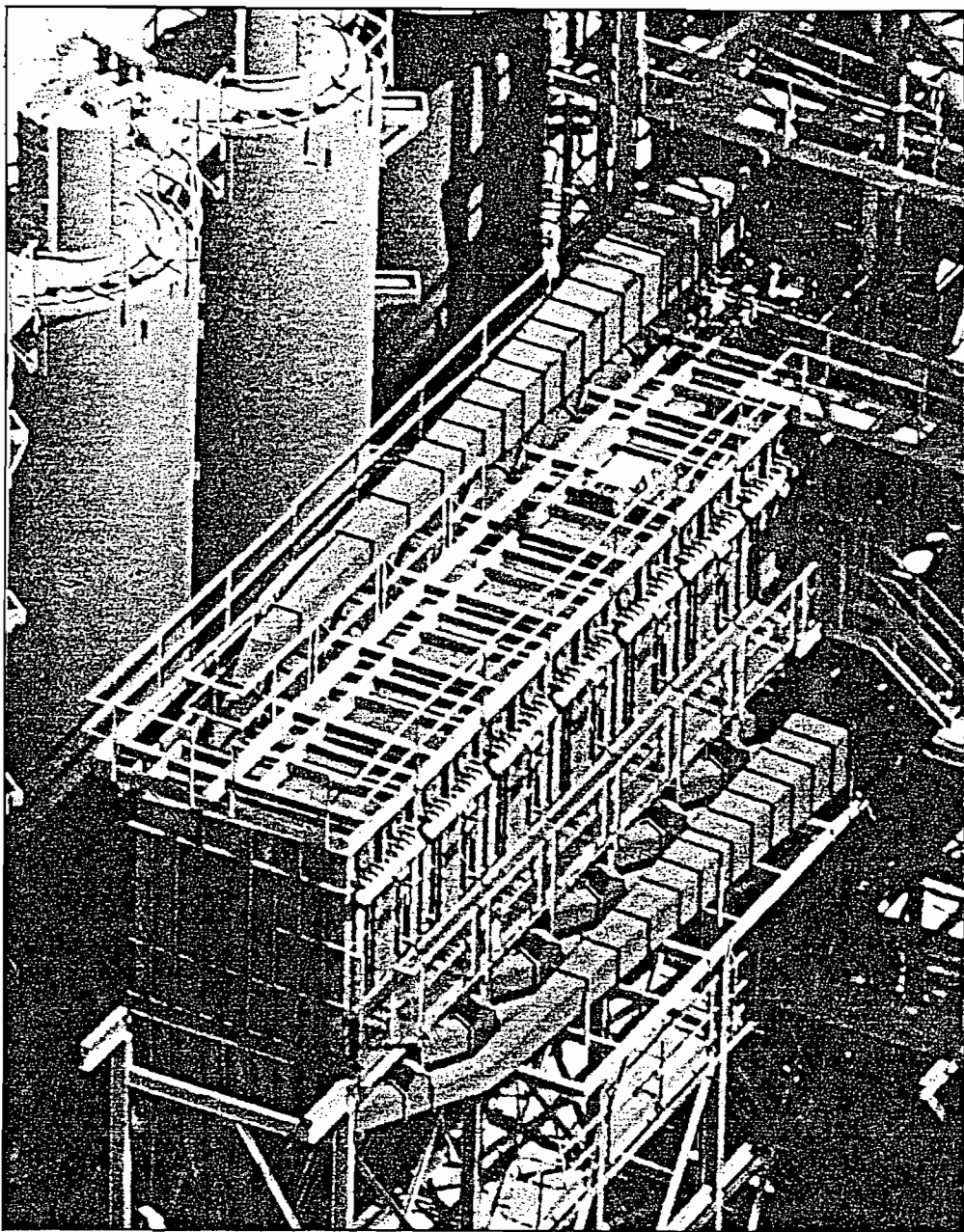
FLOW DIAGRAM

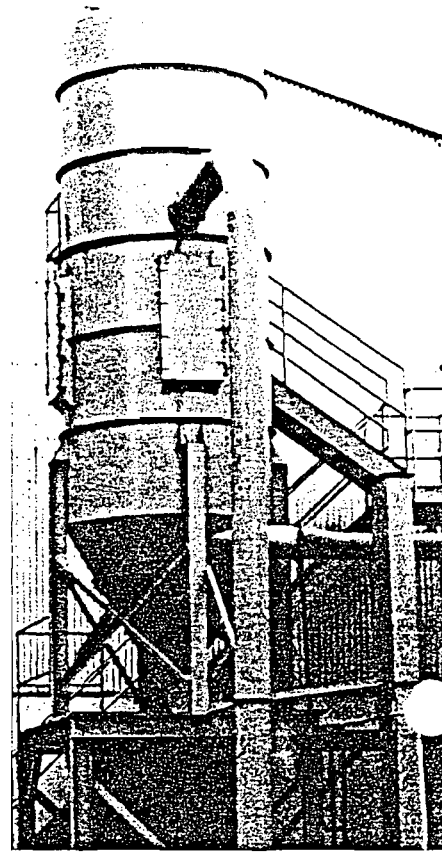
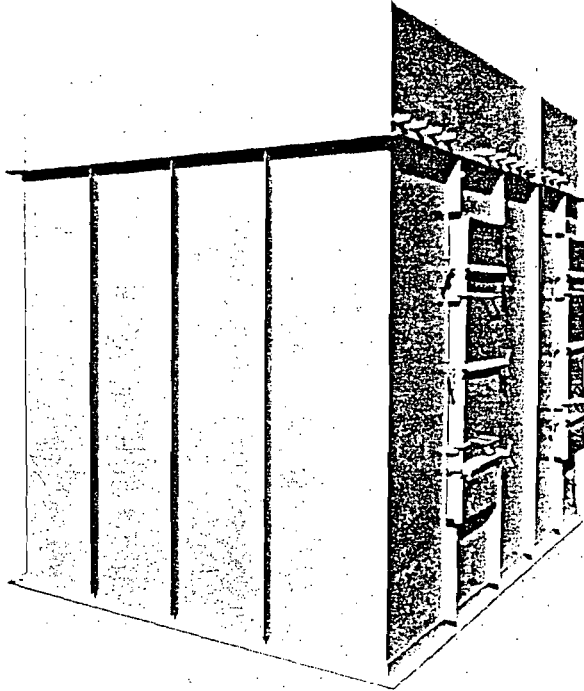
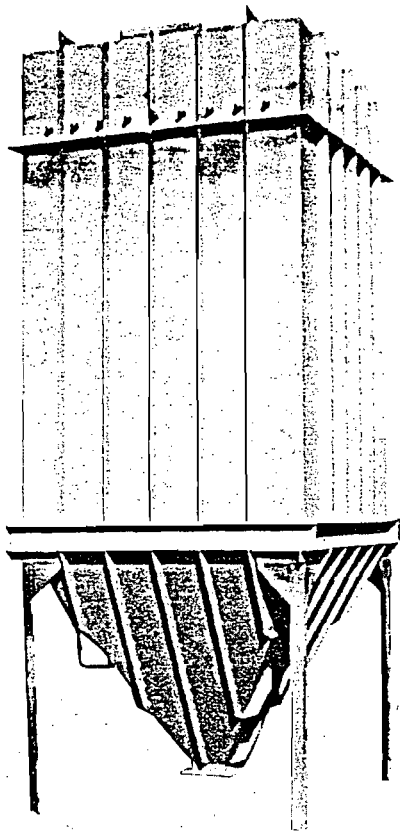
N.T.S.

**CONTROL DEVICE  
MANUFACTURER'S DATA**

# ULTRA INDUSTRIES

## Pulse-Jet Dust Collectors





## A word about Ultra Industries

**Ultra Industries** was formed by a group of pulse-jet industry executives for the specific purpose of marketing an improved line of quality dust collectors backed by expert service. □ Over 70 years of experience has gone into the design of the **ULTRA-INDUSTRIES™** Collector. It features specific product improvements and incorporates the best product benefits found in the industry. □ **Ultra Industries** has an experienced staff of dust collector engineers plus a network of technical sales representatives specifically selected for their industry experience. The entire staff pledges the engineering guidance and follow-up service necessary to maintain complete on-the-job satisfaction. □ An unparalleled combination of top design, service and value establishes **Ultra Industries** as the innovative leader in the marketplace.

### Designs

Ultra Industries has designed and built dust collectors from miniature sizes to the **largest single compartment collector built to date by any manufacturer.**

Our engineering group has handled the full gamut of materials from standard and stainless steels to the exotic Incolloys. We have designed and built ASME code vessel collectors up to 30 psig pressure ratings. Our engineering experience allows us to handle virtually any design criteria.

# ULTRA INDUSTRIES

## Two bag diameters - an Ultra Industries first.

Ultra Industries is the only major manufacturer that offers a complete line of dust collectors in each of the popular bag sizes - 4½" diameter and 5¾" diameter. Twenty-six separate models and 1842 different sizes are available, so that a collector can be selected to exactly fit your needs at the lowest cost.

## Lowest installed cost

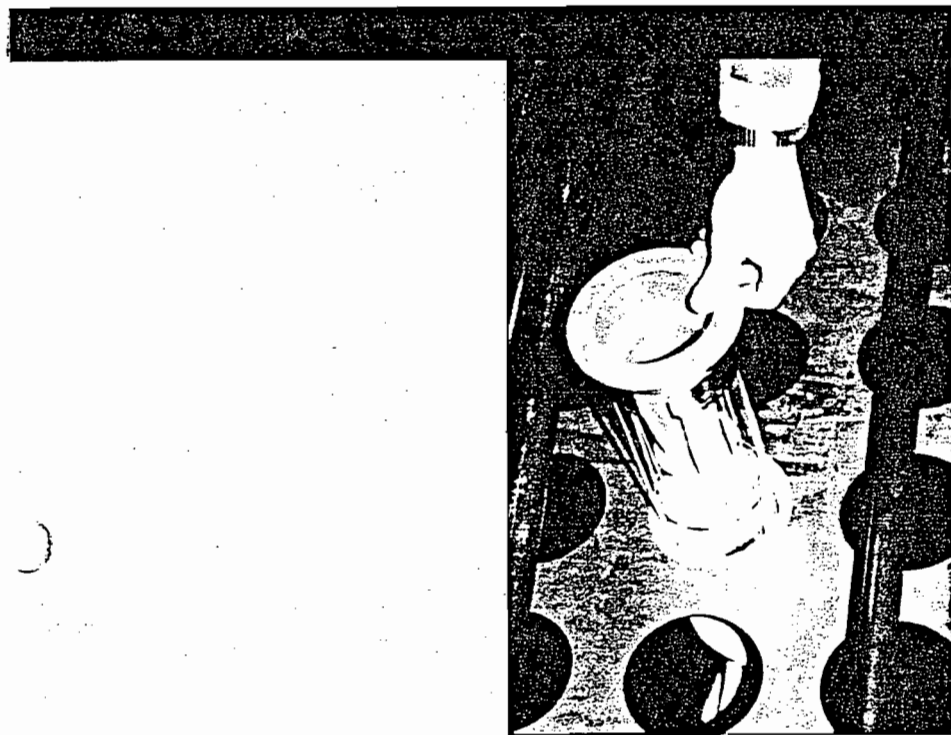
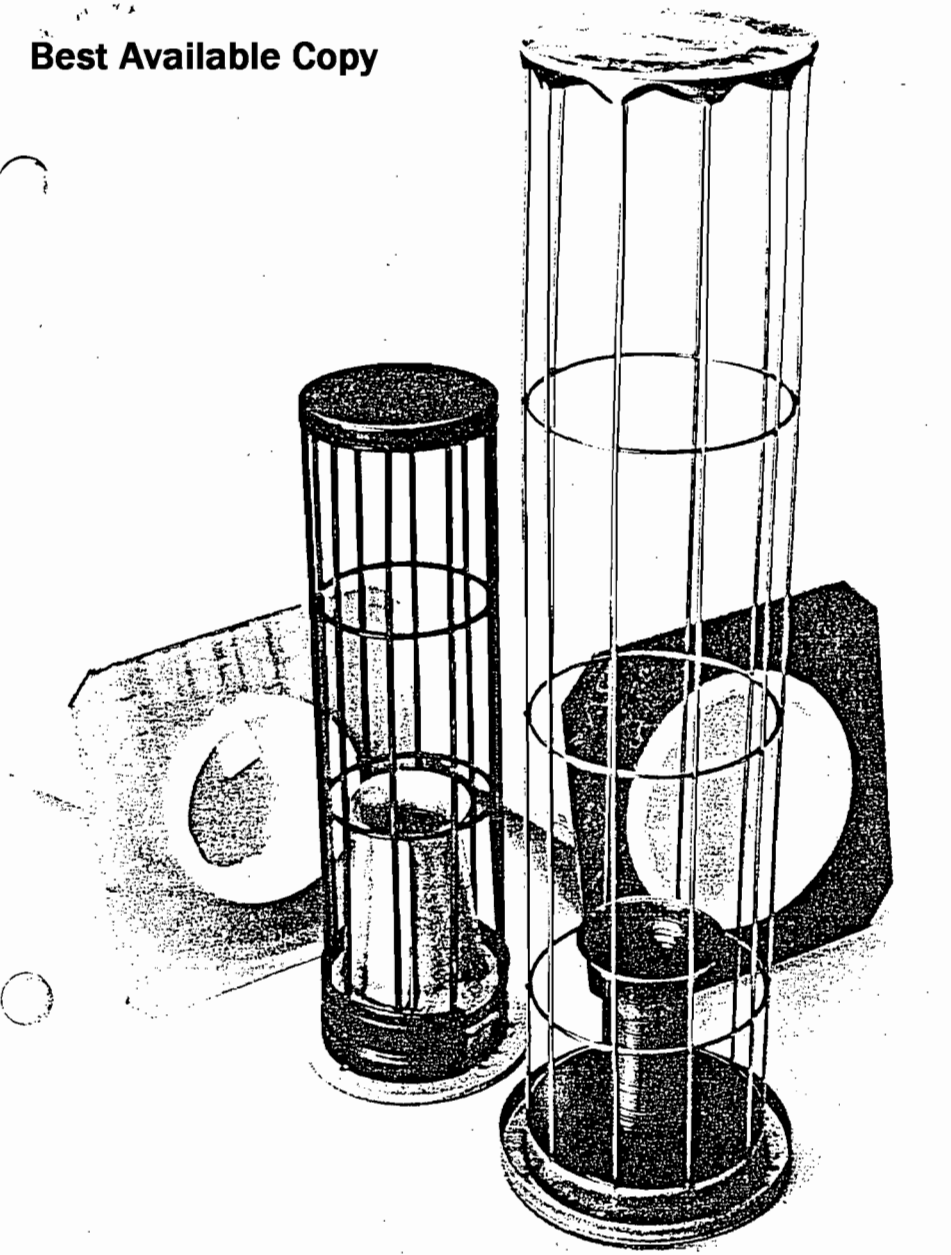
Housings are shipped completely assembled and designs selected that can save you thousands of dollars in installed cost.

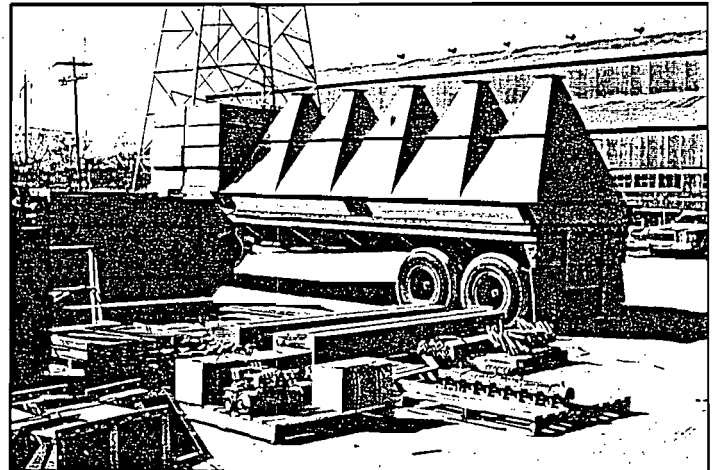
## Advanced top bag removal system

Snap-ring bags and drop-in cages, permit bags to be installed quickly and ensure leakproof seals.

## Additional features

- Easiest bag access with removable service platforms
- Minimum compressed air usage with double control, solid state timers
- Anti-plugging Magnehelic filters
- Minimum pressure drop with oversize valving
- Sanitary sloped door ledges
- Rainproof cast aluminum solenoid boxes
- Explosion venting designed to rigid NFPA standards.
- A wide selection of filter fabrics to meet your exact requirements.





**Ultra Industries' Available Options:**

- Top removal of bags and cages
- Roof or side-mounted exhaust fan
- Protective service grid under bags
- Inlet baffle with abrasion-resistant baffle plate
- Outlet with weatherhood and birdscreen
- Explosion-proof electrical components
- Differential pressure switch - signals rise in pressure across the filter
- Structural steel support legs, ladders, access platforms

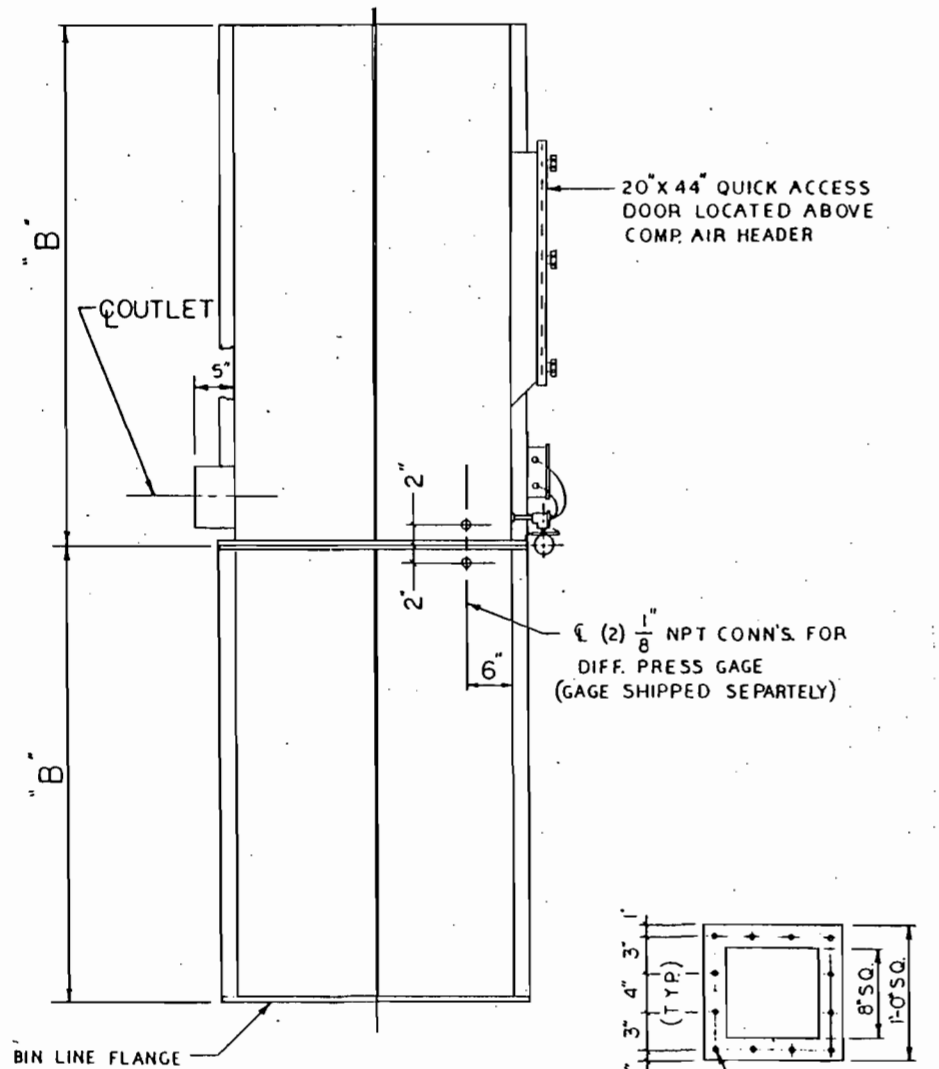
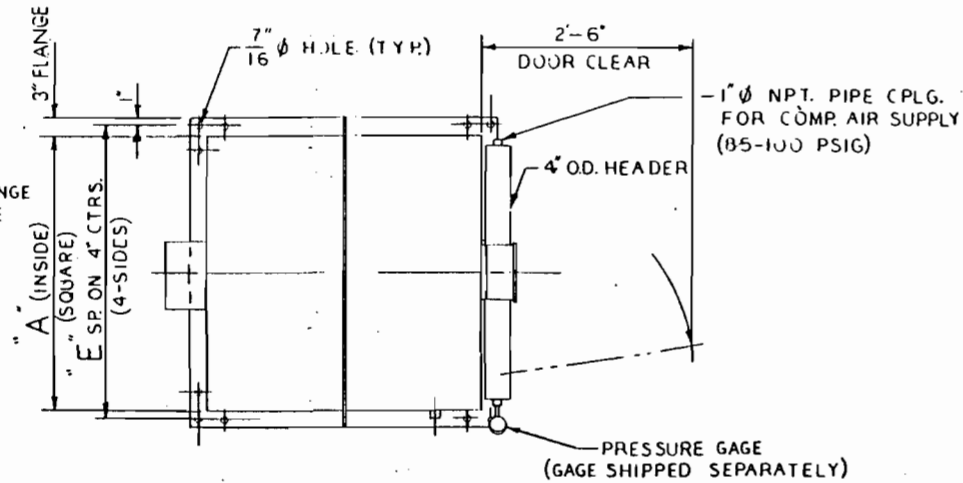
*Contact your technical representative today!*

**ULTRA  
INDUSTRIES**

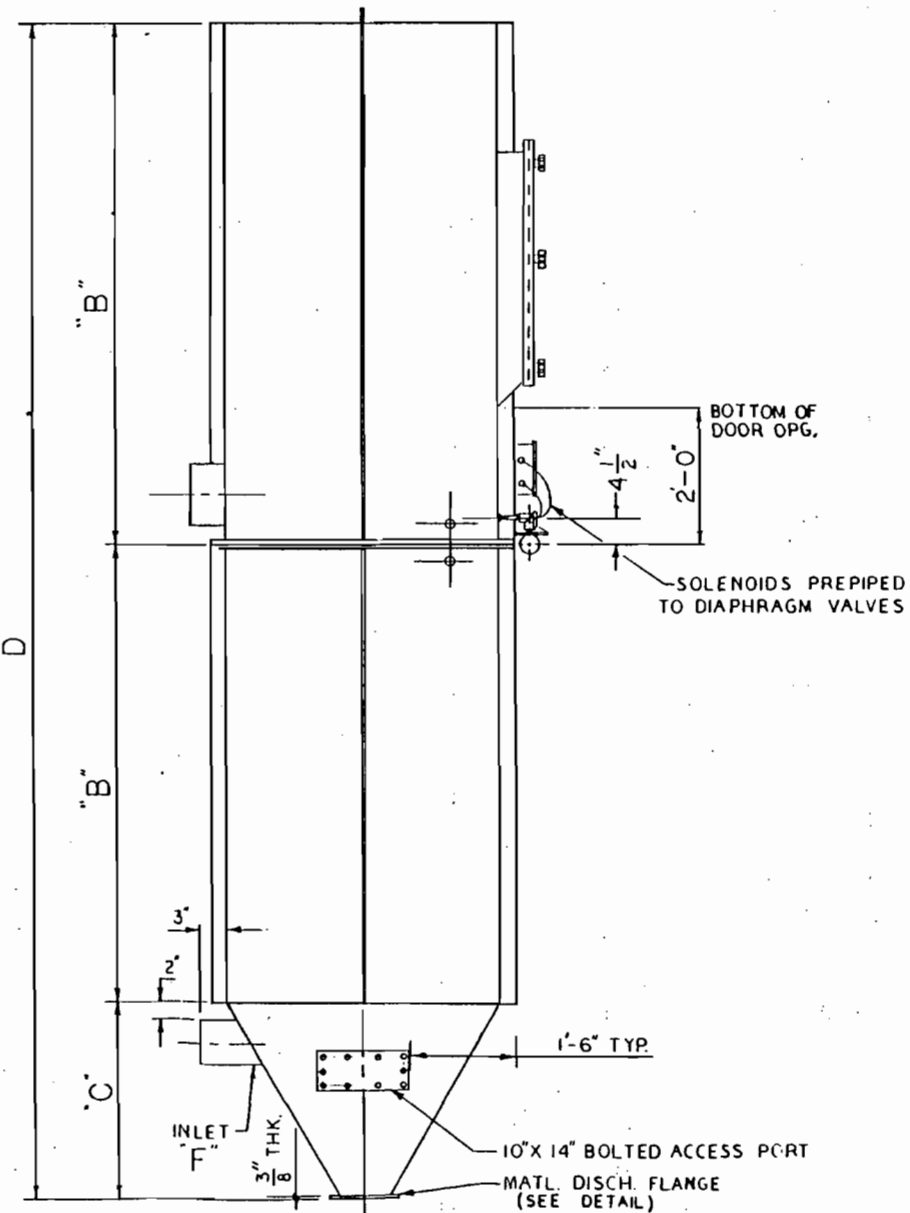
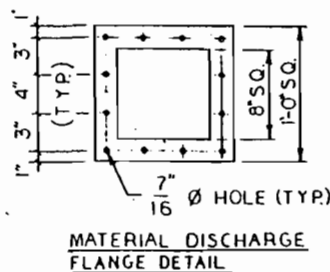
1010 Madison Street • Maywood, NJ 060153

(312) 450-1000

NOTE:  
TUBE SHEET FLANGE  
SAME AS BIN LINE  
FLANGE

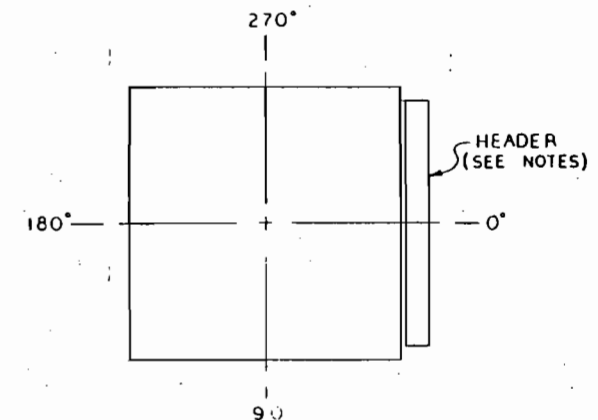


ARRANGEMENT II



ARRANGEMENT III

MODEL - BW	25 58	25 84	25 100	36 84	36 100	49 84	49 100	64 84	64 100
NUMBER OF BAGS	25	25	25	36	36	49	49	64	64
FILTER AREA (SQ.FT)	183	265	317	382	457	520	622	678	813
NUMBER OF VALVES	5	5	5	6	6	7	7	8	8
COMP AIR REQD(SCFM)	5.8	7.5	7.8	8.4	8.8	9.8	10.5	12.0	12.8
A	3'-4"	3'-4"	3'-4"	4'-0"	4'-0"	4'-8"	4'-8"	5'-4"	5'-4"
B	5'-4"	7'-6"	8'-10"	7'-6"	8'-10"	7'-6"	8'-10"	7'-6"	8'-10"
C	2'-4"	2'-4"	2'-4"	2'-11"	2'-11"	3'-6"	3'-6"	4'-1"	4'-1"
D	13'-0"	17'-4"	20'-0"	17'-11"	20'-7"	18'-6"	21'-2"	19'-1"	21'-9"
E - SPACES	11	11	11	13	13	15	15	17	17
F - INLET O.D.	10"	10"	11"	12"	14"	16"	16"	18"	18"
WT. IN LBS.	ARR. II 1170	1360	1550	1740	1950	2340	2500	2850	3370
	ARR. III 1260	1450	1640	1940	2190	2560	2720	3150	3370



ORIENTATION VIEW  
(FOR LOCATION ONLY)

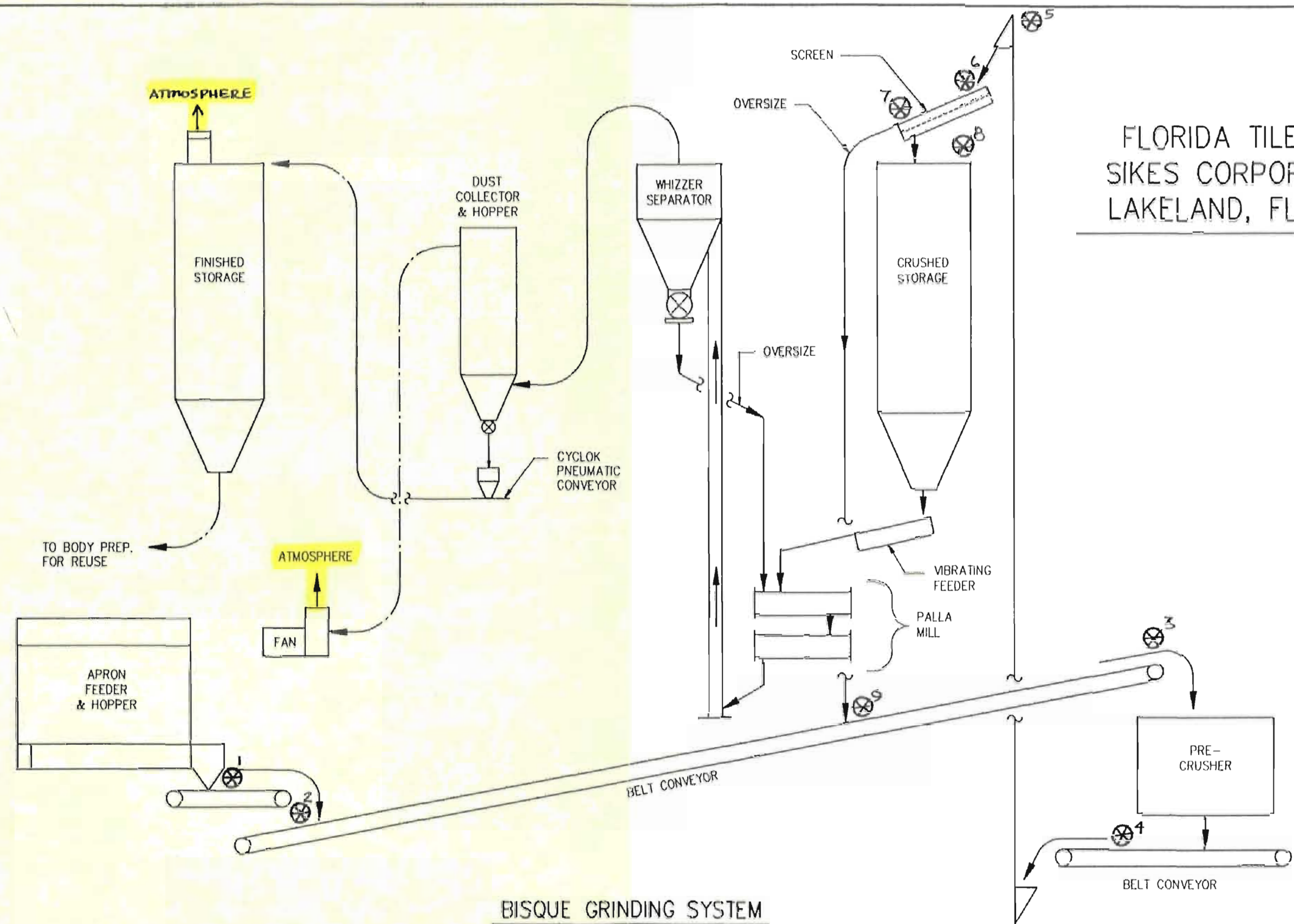
NOTES

1. DRAWING IS TO BE USED FOR GENERAL ARRANGEMENT ONLY AND NOT TO BE USED FOR CONSTRUCTION.
2. DESIGN PRESSURE IS  $\pm 17$ " W.G.
3. ALL EXTERIOR MILD STEEL SURFACES TO HAVE (1) ONE COAT OF SHOP PRIMER.
4. FLANGES ON INLET AND OUTLET ARE OPTIONAL.
5. HEADER IS ALWAYS AT 0°.
6. OUTLET CANNOT BE AT 0°.
7. OUTLET SIZE AND LOCATION TO BE DETERMINED BY CUSTOMER.

REVISIONS			
ULTRA INDUSTRIES, INC.			
1010 MADISON ST. MAYWOOD ILL. 60153			
SCALE: NONE	ORDER NO.	DRAWN BY: MJF	
DATE: 1-23-55		APPROVED BY:	
MODEL BW		TOP BAG REMOVAL WALK IN PLENUM	
1002-B9DOA			



FLORIDA TILE DIV.  
SIKES CORPORATION  
LAKE LAND, FLORIDA



**BISQUE GRINDING SYSTEM**  
FLOW DIAGRAM  
N.T.S.

328-003 1st 03-29-90 RCW