

Check Sheet

Company Name: *Celotex Corp.*
Permit Number: *AC 16-106133*
PSD Number:
County: *Deval*
Permit Engineer:
Others involved: *Mirza Baig*

Application:

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

Intent:

- Intent to Issue
- Notice to Public
- Technical Evaluation
- BACT Determination
- Unsigned Permit

Attachments:

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

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination

Post Permit Correspondence:

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

File Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 16-186133
Duval County


Mr. Alan H. Elwell, Plant Manager
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Enclosed is Permit Number AC 16-186133 to construct a new 40 tons/hr
by-product Gypsum Handling and Drying System at the existing facility located at
9225 Dames Point Road, Jacksonville, Duval County Florida, issued pursuant to
Section(s) 403, Florida Statutes.

Any party to this Order (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
Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

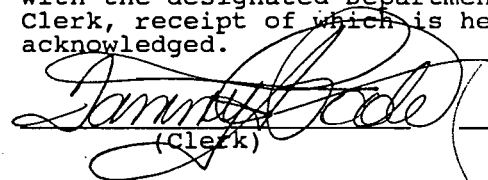

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this
NOTICE OF PERMIT and all copies were mailed before the close of business on
7/22/91 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.


(Clerk)
7/22/91
(Date)

Copies furnished to:

- H. R. Sanders, P.E.
- R. Roberson, BESD
- A. Kutyna, NED
- Reading File } 7-22-91 RR
- Mirza Baij }

Final Determination

The Cellotex Corporation
Jacksonville, Duval County, Florida

40 TPH By-Product Gypsum Handling & Drying System

Permit Number: AC 16-186133

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

July 15, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 40 TPH by-product gypsum handling & drying system at Cellotex Corporation in Jacksonville, Duval County, Florida, was distributed on June 19, 1991. The Notice of Intent to Issue was published in The Florida Times-Union on June 21, 1991. Copies of the evaluation were available for public inspection at BESD office in Jacksonville and at the Department's offices in Tallahassee and Jacksonville.

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 AC 16-186133 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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Permit Number: AC 16-186133
Expiration Date: Dec. 31, 1992
County: Duval
Latitude/Longitude: 38°23'37"N
81°33'30"W

Project: 40 TPH By-Product
Gypsum Handling & Drying 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:

For the construction of a new 40 tons/hour by-product Gypsum handling and drying system at the existing facility. This system includes receiving and storing, transferring, grinding, and drying a blend of by-product gypsum (65,800 lbs/hr) and reclaimed gypsum (14,200 lbs/hr). The dryer is fired primarily by natural gas (propane as standby fuel), with a maximum heat input of 30.0 MMBtu/hr. The dryer is to be maintained at about 1000°F. Emissions from the dryer and handling operations will be controlled by a MAC Equipment, Inc. Model 120 RPT476 baghouse, designed at a flow of 28,500 ACFM.

This facility is located at 9225 Dames Point Road, Jacksonville, Duval County, Florida. The UTM coordinates are Zone 17, 7446.430 km East and 3362.37 km North.

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

Attachments are listed below:

1. Application received September 6, 1990.
2. DER incompleteness letter dated October 5, 1990.
3. 1st revised application received January 29, 1991.
4. DER incompleteness letter dated February 25, 1991.
5. 2nd revised application received March 18, 1991.
6. DER incompleteness letter dated April 10, 1991.
7. 3rd revised application received April 17, 1991.

PERMITTEE:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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 prescribed 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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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. This source shall be allowed to operate continuously (i.e., 8760 hrs/year).
2. Particulate emissions from the baghouse shall not exceed 0.02 gr/dscf (as requested by applicant), 3.17 lbs/hr, and 13.9 tons/yr.
3. Visible emissions from the baghouse exhaust, receiving, and storage and handling (conveying) operations shall not exceed 5% opacity.
4. Compliance with the emissions limiting standards referenced in Specific Condition Nos. 2 and 3 shall be conducted within 60 days of completion of construction and initial operation, and annually thereafter. Compliance tests shall be conducted within 90-100% of permitted capacity, using EPA Methods 1, 2, 3, 4, 5, and 9 contained in 40 CFR 60, Appendix A and adopted by reference in F.A.C. Rule 17-2.700. The minimum requirements for stack sampling facilities, source sampling, and reporting shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A.

PERMITTEE:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

SPECIFIC CONDITIONS:

Visible emissions tests at the baghouse exhaust shall be conducted simultaneously, along with particulate tests, and shall be for at least 60 minutes. Visible emission tests shall also be conducted at all receiving and storage and handling operations and shall be for a duration of at least 60 minutes, each operation.

5. Pursuant to F.A.C. Rule 17-2.620(2), and Chapter 376, Jacksonville City Ordinance, this facility shall operate in such a way so as not to discharge air pollutants which will cause or contribute to an objectionable odor.

6. All applicable rules of the Department, including design discharge limitations specified in the application, shall be adhered to. The applicant shall also meet the requirements of 40 CFR 60, Subpart 000 and F.A.C. Chapters 17-2 and 17-4.

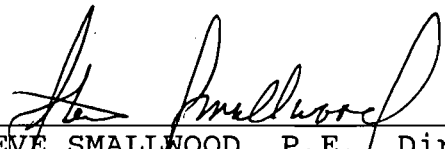
7. The Jacksonville Bio-Environmental Services Division (BESD) office shall be given at least 15 days written notice prior to compliance testing.

8. 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).

9. An application for an operation permit must be submitted to the BESD office at least 90 days prior to the expiration date of this construction permit. 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. Rules 17-4.055 and 17-4.220).

Issued this 19th day
of July, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


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

Attachment

376.101

ODOR CONTROL

376.104

CHAPTER 376 ODOR CONTROL

- 376.101 Legislative findings and determinations.
- 376.102 Public policy.
- 376.103 Exercise of county powers; territorial application of chapter.
- 376.104 Definitions.
- 376.105 Chapter 360 applicable.
- 376.106 Enforcement.
- 376.107 Rulemaking authority of Board.
- 376.108 Variances.
- 376.109 Appeals.
- 376.110 Violations and penalties.
- 376.111 Civil penalties.
- 376.112 Assessment and recovery of civil penalty.

376.101 Legislative findings and determinations. The Council finds and determines as follows:

(a) It is the city's responsibility to provide its inhabitants with air that is pure, wholesome and free from objectionable odors that cause distaste or annoyance or which unreasonably interfere with or impair the full use, benefit or development of the community.

(b) That reduced sulfur compounds and total reduced sulfur (TRS) compounds are uniquely odoriferous in very small quantities when emitted into the air separately or in combination with other compounds, chemicals or gases.

(c) That the smell associated with reduced sulfur compounds and TRS compounds has been and continues to be a source of irritation and annoyance in the city when such odors are allowed to escape beyond the property limits of the premises which emit such odors.

(d) That such odors adversely impact on property values and unreasonably interfere with the health and welfare and comfortable enjoyment of life or property of the community.

(e) That the normal conduct of business, living conditions and welfare of the inhabitants of the city is adversely affected by the emission of such odors.

(f) That because of the unique industrial, geographic and meteorological conditions common to the community, the emission of re-

duced sulfur compounds and TRS compounds, particulates, gases or odors into the air or water of the city poses a clear and continuing source of irritation and annoyance.

(g) That it is the responsibility of local government to prevent and control all odor emissions in the interest of the public health, comfort, safety and welfare of the inhabitants of the city.

(h) That the Board shall have and exercise all reasonable and necessary power and authority to eliminate all objectionable odors including, but not limited to, those odors associated with reduced sulfur compounds and TRS, including but not limited to, those which exist outside the property limits of the premises which emit such objectionable odors, gases or malodorous compounds; which objectionable odors, gases or malodorous compounds are or may be detrimental to human, animal or plant life of any kind or which unreasonably interfere with the comfortable enjoyment of life or property or the conduct of business.

History.—Ord. 88-117-123, s. 19.

376.102 Public policy. It is the public policy of the city that all objectionable odors in general, and reduced sulfur compounds and TRS odors in particular, be eliminated within the limits of available technology and that the Environmental Protection Board shall use every reasonable means to determine and identify the sources of odors in the community and establish all reasonable and necessary procedures, rules, regulations and standards necessary to detect, monitor and eliminate reduced sulfur compounds and TRS odors and other nauseous, malodorous or irritating odors within the city.

History.—Ord. 88-117-123, s. 20.

376.103 Exercise of county powers; territorial application of chapter. This chapter is an exercise of the city's powers as a county under s. 403.182, Florida Statutes. This chapter shall apply throughout the General Services District.

History.—Ord. 84-674-684, s. 4.

376.104 Definitions. In this chapter, unless the context otherwise requires:

(a) *Board* means the Environmental Protection Board.

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ENVIRONMENTAL AFFAIRS

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(b) *Director* means the Director of Health, Welfare and Bio-Environmental Services.

(c) *Division* means the Bio-Environmental Services Division.

(d) *Objectionable odor* means an irritating, malodorous or nauseous odor which, by itself, or in combination with other odors, fumes or gases exists in the atmosphere in sufficient quantities and of such duration:

(1) Exceeds an acceptable level established by the Board under its rulemaking authority or;

(2) Is irritating, annoying or offensive to a person of normal sensibilities or;

(3) Is injurious to human, plant or animal life or;

(4) Unreasonably interferes with the comfortable use and enjoyment of life or property or the conduct of business.

However, if a person alleged to have caused an objectionable odor shows that an emission is made in compliance with odor emission standards, ambient odor standards, odor incineration standards, an odor compliance plan or a consent order with respect to odor, such emission shall not be deemed an objectionable odor; provided, however, that nothing contained herein shall be construed to prohibit abatement of or enforcement against objectionable odors from a source or sources not specifically regulated or not in compliance with the above mentioned standards, compliance plans or consent orders.

(e) *Odor* means a sensation resulting from stimulation of the human olfactory organ or a quantifiable level of chemical, fume or gas which has been established by standards of the Board to constitute an odor.

(f) *Person* has the meaning given to it in s. 2.101(g) and includes a municipality, governmental agency, political subdivision or public officer.

(g) *Reduced sulfur compound* means either hydrogen sulfide or methyl mercaptan, or dimethyl disulfide or dimethyl sulfide.

(h) *Total reduced sulfur (TRS)* means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide.

History.—Ord. 84-674-684, s. 4; Ord. 88-117-123, s. 21.

376.105 Chapter 360 applicable. The provisions of Chapter 360 shall be applicable to this chapter, unless otherwise specifically provided in this chapter.

History.—Ord. 84-674-684, s. 4.

376.106 Enforcement. In addition to the enforcement provisions otherwise provided, this chapter shall be enforced by the Director and the Board generally as provided in Chapter 360. The Director may utilize the enforcement provisions of Chapter 360 under any of the following circumstances:

(a) Violation of any ambient or other odor standard, rule, regulation, compliance plan or agreement promulgated or entered into under the provisions of this ordinance; or

(b) Receipt by the Director of Citizen Complaints regarding objectionable odors from at least five persons who do not live in the same household within a ninety-day period, alleging that a person or entity is responsible for objectionable odors at or beyond the property line of the responsible person. The Director shall, by rule, prescribe the manner for filing and verifying citizen complaints and for informing the responsible persons or entities that complaints have been filed against them. The Director shall not amend the procedures for filing or verifying complaints without first giving notice and the opportunity to comment to interested persons and the public generally.

History.—Ord. 88-117-123, s. 22.

376.107 Rulemaking authority of Board. The Board shall, by rule, establish:

(a) odor emission limits,

(b) ambient odor standards, and

(c) incineration standards for objectionable odors that can be incinerated, which are applicable to objectionable odors emitted by a source. The rules of the Board shall prescribe:

(a) The methodology for arriving at these standards.

(b) The method by which violation of the odor emission limits is established.

(c) Specific analysis procedures with respect to ambient odor standards.

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ODOR CONTROL

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(d) Specific objectionable odors which must be incinerated. The rules may provide for a technique or method other than incineration to be used to comply with the requirements of the incineration standards if it is shown to the satisfaction of the Board that the technique or method is equivalent to or exceeds the required incineration in terms of control of the odor emissions.

The Board may exempt activities from the rules in those cases in which it would be manifestly inappropriate to subject them to regulation.

History.—Ord. 84-674-684, s. 4.

376.108 Variances. A variance to cause or create an odor which would otherwise be in violation of this chapter may be granted as provided in s. 360.110.

History.—Ord. 84-674-684, s. 4.

376.109 Appeals. Appeals shall be heard as provided in Part 4, Chapter 360.

History.—Ord. 84-674-684, s. 4.

376.110 Violations and penalties.

(a) A person who, knowingly and willfully or by culpable negligence:

(1) when taking a measurement of odor levels under the rules of the Board, falsifies the record or tampers with the monitoring equipment so as to produce false measurements, or procures or acquiesces in this falsification or tampering;

(2) violates a rule, regulation, order or compliance plan of the Board with respect to odor pollution control or causes or contributes to the cause of an odor nuisance; shall be guilty of a class D offense.

(b) For purposes of this section, the term *odor nuisance* shall mean the use of any property, facilities, equipment, processes, products or compounds, or the commission of any acts, that cause or materially contribute to the emission into the outdoor air of dust, fume gas, mist, odor, smoke or vapor, or any combination thereof of a character and in a quantity as to be detectable within a ninety-day period by at least five persons not living in the same household or the public, at any point beyond the property limits of the premises occupied or used by the person responsible for the source thereof, so as to interfere with their health,

repose of safety, or cause severe annoyance or discomfort, or tends to lessen normal food and water intake, or produces irritation of the upper respiratory tract, or produces symptoms of nausea, or is offensive or objectionable to normal persons because of inherent chemical or physical properties, or causes injury or damage to real property, personal property or human, animal or plant life of any kind, or is detrimental or harmful to the health, comfort, living conditions, welfare and safety of the inhabitants of the city, or which unreasonably interferes with the comfortable use and enjoyment of life or property or the conduct of business.

(c) Each day during any part of which such violation, as described in subsections (a) and (b), occurs constitutes a separate offense.

History.—Ord. 84-674-684, s. 4; Ord. 88-117-123, s. 23.

376.111 Civil penalties. The following civil penalties may be assessed by administrative or judicial process:

(a) A person who:

(1) makes or continues or causes or contributes to causing or making or continuing an objectionable odor or an odor in violation of the standards or rules or regulations established by the rules of the Board; or

(2) violates an agreement or stipulation with the Board or an order of the Board or a condition of a variance granted by the Board under s. 376.108;

may be administratively or judicially assessed a civil penalty of up to ten thousand dollars for each violation.

(b) An applicant for a variance under this chapter and an officer, director, partner, agent or attorney of an applicant who knowingly makes a false statement or provides false information on a document or paper accompanying and forming a part of the application shall be administratively or judicially assessed a civil penalty of up to one thousand dollars for each false statement or false item of information.

(c) A person who aids or participates in a violation for which a civil penalty may be assessed under this chapter shall be considered a principal in the violation and may be assessed a civil penalty of up to the maximum amount prescribed for that violation.

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(d) For violations that are of a continuing nature, each day that the violation continues shall be a separate offense subject to penalty.

History.—Ord. 84-674-684, s. 4; Ord. 88-117-123, s. 24; Ord. 89-1235-597, s. 1.

376.112 Assessment and recovery of civil penalty. Civil penalties shall be assessed by the administrative process in Chapter 360 or, in the alternative, by judicial process in a civil action filed, in the name of the city, in a court of competent jurisdiction, giving due consideration to the appropriateness of the penalty with respect to the gravity of the violation, the good faith of the violator, the history of previous violations, and the financial ability of the violator to respond. A civil penalty assessed and owed under this chapter shall be paid to the Tax Collector for deposit into the Environmental Protection Fund established by s. 360.601. An administratively assessed civil penalty under this section may be recovered in a civil action in the name of the city. The city shall be entitled to reasonable attorney's fees and costs, including appellate fees and costs, in an action where the city is successful in obtaining affirmative relief.

History.—Ord. 84-674-684, s. 4; Ord. 88-117-123, s. 25.

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

(904) 630-3666

FAX No. 630-3638



TELECOPY

DATE: July 19, 1991

TO: Mirza Baig

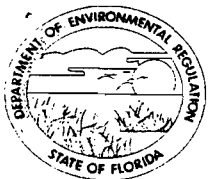
ORGANIZATION: CAPS - DER Tallahassee

TELECOPIER PHONE NUMBER: (904) 922-6979

FROM: Darrel Hall

NO. OF PAGES TO FOLLOW: 4

Copies of Chapter 376 - Odor Control



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: July 15, 1991
SUBJ: Approval of Construction Permit AC 16-186133
Cellotex 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 40 TPH By-Product Gypsum Handling & Drying System.

No comments were received during the public notice period.

I recommend your approval and signature.

CF/MB/plm

Attachments

CHF

① correct pg 566 para

② what does Chapter 376 QAB say?

(corrected 376 attached)

P 832 539 823



Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, June 1990

Sent to Mr. Alan H. Elwell	
Plant Manager	
Street & No. The Cellotex Corp.	
P.O. Box 28830	
Jacksonville, FL 32218	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date mailed: 7/22/91 AC 16-186133	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

1. Addressee's Address
2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: Mr. Alan H. Elwell Plant Mgr. The Cellotex Corp. P.O. Box 28830 Jacksonville, FL 32218	4a. Article Number P 832 539 823
	4b. Service Type <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
	7. Date of Delivery

5. Signature (Addressee)

6. Signature (Agent)
Deek Smith



PS Form 3811, October 1990

U.S. GPO: 1990-273-001

DOMESTIC RETURN RECEIPT

P 832 539 850



Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, June 1990

Sent to Mr. Alan H. Elwell, Celotex	
Street & No. P. O. Box 28830 Corp.	
P.O., State & ZIP Code Jacksonville, FL 32218	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 6-19-91 Permit: AC 16-186133	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Alan H. Elwell
Plant Manager
The Celotex Corp.
P. O. Box 28830
Jacksonville, FL 32218

4a. Article Number
P 832 539 850

4b. Service Type
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

7. Date of Delivery
6-21-91

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3817, October 1990

☆U.S. GPO: 1990-273-861

DOMESTIC RETURN RECEIPT



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

June 19, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Alan H. Elwell, Plant Manager
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Dear Mr. Elwell:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Duval County Florida.

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

Sincerely,

Barry D. Andrews

for

C. H. Fancy, P.E.
Chief

Bureau of Air Regulation

CHF/MB/plm

Attachments

c: H. R. Sanders, P.E.
R. Roberson, BESD
A. Kutyna, NED

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DER File No. AC 16-186133
Duval County

The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, The Cellotex Corporation, applied on April 17, 1991, to the Department of Environmental Regulation for a permit to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Duval County Florida.

The Department has permitting jurisdiction under the provisions of 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 a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes 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. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department, at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 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 their 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 intent. 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 receipt of this intent 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.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for Barry D. Andrews
C. H. Fañcy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 6-19-91 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kim Ober 6-19-91
Clerk Date

Copies furnished to:

H. R. Sanders, P.E.
R. Roberson, BESD
A. Kutyna, NED

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to The Cellotex Corporation, P. O. Box 28830, Jacksonville, Florida 32218, to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 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 normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

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

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way
Jacksonville, Florida 32256

Duval County Department of Health,
Welfare & Bio-Environmental Services
421 W. Church Street, Suite 412
Jacksonville, Florida 32202

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

The Cellotex Corporation
Jacksonville, Duval County, Florida

40 TPH By-Product Gypsum Handling & Drying System

Permit Number: AC 16-186133

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

June 19, 1991

I. Application

A. Applicant

The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

B. Project and Location

The Cellotex Corporation has applied for a permit to construct a new 40 tons/hour by-product Gypsum handling and drying system at the existing facility located at 9225 Dames Point Road, Jacksonville, Florida. The UTM coordinates are Zone 17, 7446.43 East and 3362.37 North.

C. Facility Category

The SIC Code is 3275 and the SCC Code is 3-05-015-13.

The Cellotex Corporation initially applied for a construction permit on September 6, 1990. The company later resubmitted a revised application on April 17, 1991, which was deemed complete on that day.

II. Project Description

The Cellotex Corporation has applied for a construction permit to install a new 40 tons/hour by-product Gypsum handling and drying system at their existing facility. This system includes receiving and storing, transferring, grinding, and drying a blend of by-product gypsum (65,800 lbs/hr) and reclaimed gypsum (14,200 lbs/hr). The dryer is fired primarily by natural gas (propane as standby fuel), with a maximum heat input of 30.0 MMBtu/hr. The dryer is to be maintained at about 1000°F. Emissions from the dryer and handling operations will be controlled by a MAC Equipment, Inc. Model 120 RPT476 baghouse, designed at a flow of 28,500 ACFM.

III. Rule Applicability

The Cellotex Corporation is an existing facility located in Jacksonville, Duval County, Florida, an area designated non-attainment for ozone, unclassifiable for sulfur dioxide (F.A.C. 17-2.430) and particulate matter (F.A.C. 17-2.410), and attainment for the other criteria pollutants (F.A.C. 17-2.420).

By-product gypsum and reclaimed gypsum board plants are not listed on Table 500-1, Major Facility Categories (List of 28). This is an existing major facility because the permitted emissions of PM/PM₁₀ exceeds 267 tons/year, SO₂ emissions exceed 522 tons/year, and NO_x emissions exceed 137 tons/year, as per F.A.C.

17-2.100. This source is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes and F.A.C. Chapter 17-2.

This source, a new by-product gypsum handling and drying system, is not subject to Prevention of Significant Deterioration [since the net increases are: PM/PM₁₀, 13.9 TPY (less than 25 TPY); SO₂, 0.07 TPY (less than 40 TPY); NO_x, 17.96 TPY (less than 40 TPY); VOC, 0.35 TPY (less than 40 TPY); and CO, 4.5 TPY (less than 100 TPY)] or nonattainment requirements, and therefore will be permitted pursuant to F.A.C. Rule 17-2.520. This source is subject to the NSPS requirements of 40 CFR 60.670, Subpart 000.

IV. Source Impact Analysis

A. Emission Limitations

The Department agrees with the applicant's proposal to meet a 0.020 gr/dscf particulate emission limitation of 3.17 lbs/hr and 13.9 tons/yr from the baghouse. Visible emissions from the baghouse stack shall not exceed 5% opacity. Fugitive (visible) emissions generated during storage and handling/conveying operations shall not exceed 5% opacity. The baghouse shall be equipped with a pressure drop monitoring device.

No objectionable odors will be allowed at any time.

The dryer will be fired by natural gas with propane as a stand-by fuel.

B. Air Quality Impacts

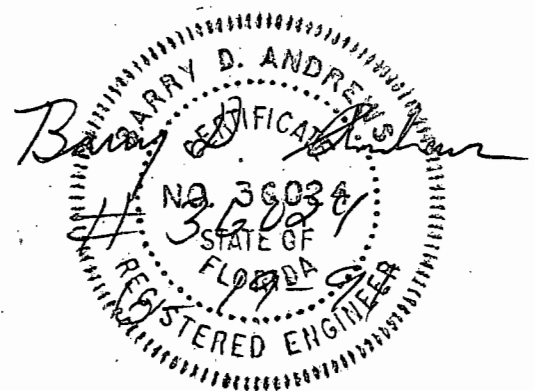
The new 40 tons/hour by-product gypsum handling and drying system shall not exceed the following limits:

Pollutant	Emission Rate	
	lbs/hr	tons/yr
PM/PM ₁₀	3.17	13.9
SO ₂	0.017	0.07
NO _x	4.1	17.96
CO	1.02	4.5
VOC	0.08	0.35

From a technical review of the application, the Department has determined that the construction and operation of this source will not have a detrimental impact on Florida's ambient air quality.

V. Conclusion

Based on the information provided by The Cellotex Corporation, the Department has reasonable assurance that the installation of a Mac Equipment, Inc. Model 120 RPT476 baghouse, 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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Permit Number: AC 16-186133
Expiration Date: Dec. 31, 1992
County: Duval
Latitude/Longitude: 38°23'37"N
81°33'30"W

Project: 40 TPH By-Product
Gypsum Handling & Drying 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:

For the construction of a new 40 tons/hour by-product Gypsum handling and drying system at the existing facility. This system includes receiving and storing, transferring, grinding, and drying a blend of by-product gypsum (65,800 lbs/hr) and reclaimed gypsum (14,200 lbs/hr). The dryer is fired primarily by natural gas (propane as standby fuel), with a maximum heat input of 30.0 MMBtu/hr. The dryer is to be maintained at about 1000°F. Emissions from the dryer and handling operations will be controlled by a MAC Equipment, Inc. Model 120 RPT476 baghouse, designed at a flow of 28,500 ACFM.

This facility is located at 9225 Dames Point Road, Jacksonville, Duval County, Florida. The UTM coordinates are Zone 17, 7446.430 km East and 3362.37 km North.

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

Attachments are listed below:

1. Application received September 6, 1990.
2. DER incompleteness letter dated October 5, 1990.
3. 1st revised application received January 29, 1991.
4. DER incompleteness letter dated February 25, 1991.
5. 2nd revised application received March 18, 1991.
6. DER incompleteness letter dated April 10, 1991.
7. 3rd revised application received April 17, 1991.

PERMITTEE:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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 prescribed 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:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

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. This source shall be allowed to operate continuously (i.e., 8760 hrs/year).
2. Particulate emissions from the baghouse shall not exceed 0.02 gr/dscf (as requested by applicant), 3.17 lbs/hr, and 13.9 tons/yr.
3. Visible emissions from the baghouse exhaust, receiving, and storage and handling (conveying) operations shall not exceed 5% opacity.
4. Compliance with limiting standards referenced in Specific Condition Nos. 2 and 3 shall be conducted within 60 days of completion of construction and initial operation, and annually thereafter. Compliance tests shall be conducted using EPA Methods 1, 2, 3, 4, 5, and 9 contained in 40 CFR 60, Appendix A and adopted by reference in F.A.C. Rule 17-2.700. The minimum requirements for stack sampling facilities, source sampling, and reporting shall be in accordance with F.A.C. Rule 17-2.700 and 40 CFR 60, Appendix A.

PERMITTEE:
The Cellotex Corporation

Permit Number: AC 16-186133
Expiration Date: December 31, 1992

SPECIFIC CONDITIONS:

Visible emissions tests at the baghouse exhaust shall be conducted simultaneously, along with particulate tests, and shall be for at least 60 minutes. Visible emission tests shall be conducted at all receiving and storage and handling operations and shall be for a duration of at least 60 minutes, each operation.

5. Pursuant to F.A.C. Rule 17-2.620(2), and Chapter 376, Jacksonville City Ordinance, this facility shall operate in such a way so as not to discharge air pollutants which will cause or contribute to an objectionable odor.

6. All applicable rules of the Department, including design discharge limitations specified in the application, shall be adhered to. The applicant shall also meet the requirements of 40 CFR 60, Subpart 000 and F.A.C. Chapters 17-2 and 17-4.

7. The Jacksonville Bio-Environmental Services Division (BESD) office shall be given at least 15 days written notice prior to compliance testing.

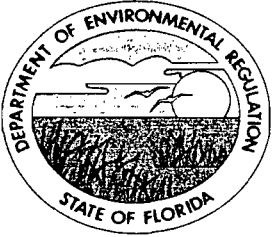
8. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

9. An application for an operation permit must be submitted to the BESD office at least 90 days prior to the expiration date of this construction permit. 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. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

FAX TRANSMITTAL LETTER

DATE: 6-19-91

TO:

NAME: Alan Cluwell
AGENCY: Cluwell Corp.
TELEPHONE: 904/751-4400 FAX 904/757-6547
OF PAGES (INCLUDE COVER SHEET): 3

FROM:

NAME: Barry Andrews
AGENCY: DER - BAR

IF ANY PAGES ARE NOT CLEARLY RECEIVED, PLEASE CALL IMMEDIATELY. PHONE NO. 904/488-1344

SENDER'S NAME: Patty Adams

COMMENTS: Intent to issue package was mailed this afternoon

Message Confirmation

JUN-19-'91 WED 15:58

Term ID: DIV OF AIR RES MGMT D-9999

Tel No: 904 422 4979

No.	Date	ST. Time	Total Time	ID	DeptCode	OK	NG
025	06-19	15:56	00:02:19	9047576547		03	00

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to The Cellotex Corporation, P. O. Box 28830, Jacksonville, Florida 32218, to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 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.

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

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

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way
Jacksonville, Florida 32256

Duval County Department of Health,
Welfare & Bio-Environmental Services
421 W. Church Street, Suite 412
Jacksonville, Florida 32202

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.

RECEIVED

JUL 11 1991

Division of Air Resources Management

cc: A. Kutzma, NE Dist
R. Robinson, BESD

FLORIDA PUBLISHING COMPANY
Publisher
JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared _____

Edna Taylor

_____ who on oath says that he is

a classified advertising rep _____ of The Florida Times-Union,

a daily newspaper published at Jacksonville in Duval County, Florida; that the
attached copy of advertisement, being a legal notice

in the matter of _____ state of Florida

in the _____ Court,

was published in THE FLORIDA TIMES-UNION in the issues of _____

June 21st, 1991

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

Sworn to and subscribed before me
this 10th day of
JULY 1991

Mollie A. Skinn
Notary Public
State of Florida at Large.

My Commission Expires

DA 444

Notary Public, State of Florida
My Commission Expires Dec. 2, 1994
Bonded Thru Lloyd Fain - Insurance Inc.

Edna Taylor

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
REGULATION
NOTICE OF INTENT TO
ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to The Celotex Corporation, P. O. Box 28830, Jacksonville, Florida 32218, to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 within 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 modifications 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 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 a 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 a right such person has to request a hearing under Section 120.57, F.S., and to participate as a party in 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. T. Application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Northeast District
7825 Baymeadows Way
Jacksonville, Florida 32256
Duval County Department of Health,
Welfare & Bio-Environmental Services
421 W. Church Street, Suite 412
Jacksonville, Florida 32202
Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments must be received within 14 days of the publication of this notice and will be considered in the Department's final determination.

Molly Strain legal Dept.
T The Florida Times-Union
One Riverside Ave. / P.O. Box 1949
Jacksonville, Florida 32231

PRE-SORTED
FIRST CLASS



U.S. POSTAGE

00.25

H MEIER 351952

10PL

Dept. of Environmental Regulation
Attn: Mr. Barry Andrews
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

JUL 11 1991

Department of Environmental Regulation
Division of Air

MIRZA 904 922 6978
BAIG

RECEIVED

JUL 12 1991

Division of Air Resources Management

ad no. 731508

FLORIDA PUBLISHING COMPANY

Publisher

JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared _____

Edna Taylor

who on oath says that he is

a classified advertising rep _____ of The Florida Times-Union

a daily newspaper published at Jacksonville in Duval County, Florida; that the attached copy of advertisement, being a _____ legal notice

in the matter of _____ notice of intent

in the _____ Court,

was published in THE FLORIDA TIMES-UNION in the issues of _____

June 21st, 1991

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

Sworn to and subscribed before me this _____ day of _____ 91

Molly Strach
Notary Public,
State of Florida at Large.
My Commission Expires _____
Notary Public, State of Florida

Edna Taylor

DA 444 My Commission Expires Dec. 2, 1994

Bonded Thru Troy Fain - Insurance Inc.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
REGULATION
NOTICE OF INTENT TO
ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to The Celotex Corporation, P. O. Box 28830, Jacksonville, Florida 32218, to construct a new 40 tons/hr by-product Gypsum Handling and Drying System at the existing facility located at 9225 Dames Point Road, Jacksonville, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 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 modifications of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by Petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action. If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Department of Environmental Regulation Bureau of Air Regulation 2600 Blair Stone Road Tallahassee, Florida 32399-2400 Department of Environmental Regulation Northeast District 7825 Baymeadows Way Jacksonville, Florida 32256 Duval County Department of Health, Welfare & Bio-Environmental Services 421 W. Church Street, Suite 412 Jacksonville, Florida 32202 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.

P 407 852 649
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

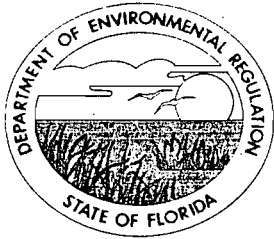
PS Form 3800, June 1985
 *U.S.G.P.O. 1989-234-555

Sent to Mr. Alan H. Elwell, Celotex	
Street and No. P. O. Box 28830	
P.O., State and ZIP Code Jacksonville, FL 32218	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 4-10-91 Permit: AC 16-186133	

● **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. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. (Extra charge)	2. <input type="checkbox"/> Restricted Delivery (Extra charge)
3. Article Addressed to: Mr. Alan H. Elwell, Plant Manager The Celotex Corporation P. O. Box 28830 Jacksonville, FL 32218	4. Article Number P 407 852 649 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 <i>Alan H. Elwell</i>	Always obtain signature of addressee or agent and DATE DELIVERED. 8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 4-15-91	

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 10, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alan H. Elwell, Plant Manager
The Celotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Re: Duval County - A.P.
The Celotex Corporation
New By-Product Gypsum Process
AC 16-186133

Dear Mr. Elwell:

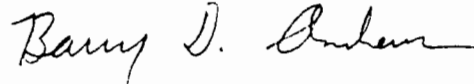
The Department has reviewed your March 8, 1991 response to its incompleteness letter of February 25, 1991, and has deemed your response incomplete.

Based on the information provided in your response, your proposed modification appears to be subject to PSD analysis for the pollutants SO₂ and NO_x. According to Question and Rule No. 4 of the New Source Review table in the tables section of your response, the proposed modification will result in emissions greater than the PSD significant emission rates for SO₂ and NO_x by itself (248.4 tons per year (TPY) increase for SO₂ and 48.3 TPY for NO_x compared to the 40 TPY significant emission rates for both pollutants). In subsequent tables in this section, you detail the emissions decreases and increases which could result in contemporaneous changes of only 25.0 TPY for SO₂ and 2.9 TPY for NO_x. These changes would then be less than the PSD significant emission rates for SO₂ and NO_x emissions. However, your decreases are based on decreases in allowable emissions, and not in actual emissions. In addition, based on the information provided, these decreases are not federally enforceable. Please recalculate the contemporaneous emission changes for comparison with the PSD significant emission rates for SO₂ and NO_x using actual emissions, not allowable emissions. The actual emissions for existing sources should be based on the previous two years of operating data (F.A.C. Rule 17-2.100(3)). The correct calculations should be proposed allowable emissions minus existing actual emissions (based on data) for comparison with the significant emission rates. We have included two letters from EPA to two other applicants stating this procedure.

Mr. Alan H. Elwell
Page 2 of 2

The processing of your application will continue as soon as the above requested information and any required PSD analysis is received. If you have any questions, please contact Mirza Baig or Cleve Holladay at 904-488-1344.

Sincerely,



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

CHF/CH/plm

Enclosures

c: H. R. Sanders, P.E.
R. Roberson, BESD
A. Kutyna, NED

M. Baig

C. Holladay



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET NE
ATLANTA, GEORGIA 30365

JAN 16 1990

4APT-APB-cdw

RECEIVED
JAN 15 1990
DER BAO

Ms. Patricia G. Adams
Planner
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Florida Mining and Materials (PSD-FL-124)

Dear Ms. Adams:

This is to acknowledge receipt of the application for a proposed amendment to the above referenced permit dated December 7, 1989. As discussed between Mr. Barry Andrews of FDER and Mr. Gregg Worley of my staff on January 8, 1990, we have the following comment.

The netting calculation performed by the applicant was incorrect. The applicant used permitted allowable emissions as actual emissions rather than using existing emissions based on the previous two years of operating data. The correct calculation should be proposed allowable emissions-existing actual emissions (based on data).

The emissions changes should be evaluated correctly to determine whether the proposed change is significant for any pollutant.

Thank you for the opportunity to review this package. Any questions or comments may be directed to Mr. Gregg Worley of my staff at (404) 347-2864.

Sincerely yours,

Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

copy to...
C. Hall...
2 copies...
1/18/90



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 4 1990

4APT-AEB

RECEIVED

APR 09 1990

DER-BAQM

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

RE: Florida Crushed Stone (PSD-FL-091)

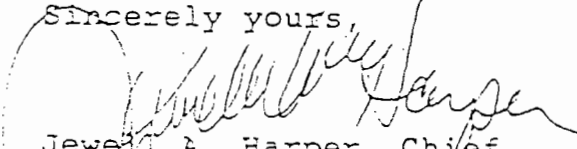
Dear Mr. Fancy:

This is to acknowledge receipt of your letter dated March 15, 1990, transmitting a request by Florida Crushed Stone to amend their prevention of significant deterioration (PSD) permit to allow the burning of tire derived fuel (TDF) in their cement kiln. The current permit for the source limits the fuel of the kiln to coal only. As discussed between Mr. Bruce Mitchell of your staff and Mr. Gregg Worley of my staff on March 30, 1990, we have the following comments.

Under the scenario presented by the source, the switch to the use of TDF in the kiln would not constitute a major modification for the purposes of PSD provided that the increase in pollutants due to the fuel switch did not exceed significant emissions increase levels. It is important to note that the change in emissions must be evaluated from "old actual" to "new allowable" emissions. The old actual emissions must be based on the previous two years of operating data unless some other period is deemed to be more representative of normal operating conditions. The new allowable emissions will be those emissions which are reflected in the amended permit. Also, it was noted that the list of pollutants to be tested did not include benzene. Since benzene is a pollutant regulated under the Clean Air Act for which a significant emissions rate has not been established, any increase of emissions of benzene would subject the source to PSD.

Thank you for the opportunity to review and comment on this package. If you have any further questions or comments, please do not hesitate to contact Mr. Gregg Worley of my staff at 404/347-2864.

Sincerely yours,


Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division

Jim Walter corporation

ENVIRONMENTAL AFFAIRS DEPARTMENT

POST OFFICE BOX 31075 (33631-3075) - 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

April 16, 1991

RECEIVED

APR 17 1991

DER-BAQM

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

RE: DUVAL COUNTY - A.P.
THE CELOTEX CORPORATION
NEW BY-PRODUCT GYPSUM PROCESS
AO 16-186133

Dear Mr. Fancy:

Enclosed are two copies of the third revision to the referenced application. The primary change has been to remove fuel oil as an alternate fuel. As a result the proposed modification will not cause a significant emissions increase for any regulated pollutant.

Should you have questions or require additional information, please contact me at (813) 873-4351.

Sincerely,



H. R. Sanders, P.E.
Senior Environmental Engineer

HRS/su

cc: A. H. Elwell, Celotex-Jacksonville

m. Guig
R. Robinson, BESD
A. Kutyna, NED

*Company is
sending Mirza
- being another
copy*

THE CELOTEX CORPORATION
JACKSONVILLE, FLORIDA

RECEIVED

APR 17 1991

DER-BAQM

APPLICATION TO CONSTRUCT AIR
POLLUTION SOURCES
(REVISED)

By-Product Gypsum Handling
and Drying System

September 1990
(Revised April 1991)
(Second Revision March 1991)
(Third Revision April 1991)

Prepared by:

H. R. Sanders
Jim Walter Corporation
Tampa, Florida

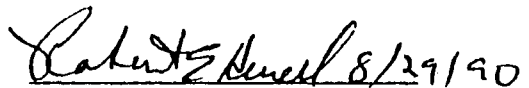
Authorization

Jim Walter corporation

POST OFFICE BOX 31075 (33631-3075) - 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

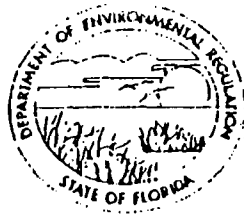
August 29, 1990

Notice is hereby given that Alan H. Elwell, Plant Manager, The Celotex Corporation, Dames Point Road, Jacksonville, Duval County, Florida is the authorized representative for The Celotex Corporation at the Jacksonville facility and has full signatory authority for environmental matters.


Robert E. Herrell Date
Vice President-Manufacturing
Building Products Division

Application

NORTHEAST DISTRICT
3426 HILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200



Revised. THIRD
EDITION.
4/17/91.
HRS

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER
GARY L. SHAEFFER
ASSOCIATE DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Process [X] New¹ [] Existing¹
APPLICATION TYPE: [X] Construction [] Operation [] Modification AC 16-186133

COMPANY NAME: The Celotex Corporation COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) By-Product Gypsum Process-
ing

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville

UTM: East 7446.430 North 3362.370

Latitude 30° 23' 37"N Longitude 81° 33' 30"W

APPLICANT NAME AND TITLE: Alan H. Elwell, Plant Manager

APPLICANT ADDRESS: P.O. Box 28830; Jacksonville, FL 32218

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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: Alan H. Elwell

Alan H. Elwell - Plant Manager
Name and Title (Please Type)

Date: 8/31/90 Telephone No. 904/751-4400

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

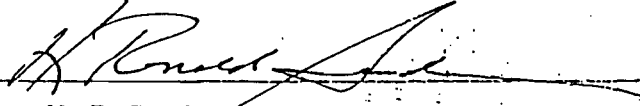
This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance,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

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

SEE REVISED TABLE 1.

HRS

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

Signed 
H. R. Sanders
Name (Please Type)

Jim Walter Corporation
Company Name (Please Type)
4010 Boy Scout Blvd.; Tampa, FL 33607-5750
Mailing Address (Please Type)

Florida Registration No. PE0035237 Date: 8/23/90 Telephone No. 813/873-4351

SECTION II: GENERAL PROJECT INFORMATION

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

See Attachment A

B. Schedule of project covered in this application (Construction Permit Application Only)
Start of Construction: 4-29-91 Completion of Construction: 12-13-91

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.)
Baghouse and associated equipment - \$200,000

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

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

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

1. Is this source in a non-attainment area for a particular pollutant? No
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No
4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? Yes
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? Yes
- a. If yes, for what pollutants? Particulates
 - 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.

See Attachment B.

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		
By-Product Gypsum	None	-	65,800 (wet)	A
Reclaimed Gypsum	None	-	14,200 (wet)	B
*Natural Gas	None	-	28,990 Ft ³ /hr	G
*Propane	None	-	11,970 Ft ³ /hr	G

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

- Total Process Input Rate (lbs/hr): 80,000 (wet)
- Product Weight (lbs/hr): 66,000 (dry)

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

Note: 40 CFR Part 60 Subpart 000. PM allowable is 0.022 grains/dscf.

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual I/yr			lbs/yr	I/yr	
PM	3.17	13.9	40CFR Part 60 Subpart 000	3.46	3300	14,454	F
SO _x	0.017	0.07	N/A	N/A	0.017	0.07	F
NO _x	4.1	17.96	N/A	N/A	4.1	17.96	F
CO	1.02	4.5	N/A	N/A	1.02	4.5	F
VOC	0.08	0.35	N/A	N/A	0.08	0.35	F

¹See Section V, Item 2.

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

³Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
MAC Equipment, Inc. Baghouse Model 120 RPT 476	PM	99.9	N/A	Mfg. guarantee

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.019	0.029	30.0
Propane (MMCF/hr)	0.008	0.012	30.0

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

Fuel Analysis: See Attachment D.

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

All material is recovered as product or reprocessed in a closed

cycle system.

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

Stack Height: 73 ft. Stack Diameter: 3.0 ft.
 Gas Flow Rate: 28,500 ACFM 18,500 DSCFM Gas Exit Temperature: 160 °F.
 Water Vapor Content: 15.6 (by weight) % Velocity: 67.2 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack 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: _____

N/A

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

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

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. Figures 3-7.
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. Figures 1 & 2.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

Yes No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Costs:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.
- b. Diameter: ft.
- c. Flow Rate: ACFM
- d. Temperature: °F.
- e. Velocity: FPS

Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- Useful Life:
- f. Operating Cost:
- Energy:²
- h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

Explain method of determining efficiency.

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

J. Applicability to manufacturing processes:

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

J.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

J. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

J. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹ Explain method of determining efficiency.

² Energy to be reported in units of electrical power - KW/11 design rate.

(5) Environmental Manager:

BEST AVAILABLE COPY

(6) Telephone No.:

(7) Emissions:

Contaminant

Rate or Concentration

(8) Process Rate:

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:

Contaminant

Rate or Concentration

(8) Process Rate:

10. Reason for selection and description of systems:

Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DEGRADATION

Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂ _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? Yes No

b. Was instrumentation calibrated in accordance with Department procedures?

Yes No Unknown

U. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicant's Maximum Allowable Emission Data

Pollutant	Emission Rate
1SP	_____ grams/sec
SO ₂	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Sect. V - Supplement

THE CELOTEX CORPORATION
JACKSONVILLE, FLORIDA

Application to Construct a By Product
Gypsum Handling and Drying System

SECTION V: SUPPLEMENTAL REQUIREMENTS

1. RAW MATERIALS

- a. By-Product Gypsum - 28 dry tons/hour (Design) @ 15% Moisture

$$\frac{28}{.85} = \frac{32.9 \text{ wet tons}}{\text{hour}}$$
$$= \frac{65,800 \text{ wet lb}}{\text{hour}}$$

- b. Reclaim Gypsum - 5 dry tons/hour (Design) @ 30% Moisture

$$\frac{5}{0.7} = \frac{7.1 \text{ wet tons}}{\text{hour}}$$
$$= \frac{14,200 \text{ wet lb}}{\text{hour}}$$

- c. (Deleted)

- d. Natural Gas

$$\frac{30.0 \times 10^6 \text{ Btuh}}{1.035 \times 10^3 \text{ Btu/ft}^3} = 28.99 \times 10^3 \text{ ft}^3/\text{hour}$$
$$= \underline{28,990} \text{ ft}^3/\text{hr}$$

- e. Propane

$$\frac{30.0 \times 10^6 \text{ Btuh}}{2.507 \times 10^3 \text{ Btu/ft}^3} = 11.97 \times 10^3 \text{ ft}^3/\text{hour}$$

Total Process Input (Maximum)

By-Product Gypsum = 65,800 lb/hr
Reclaim Gypsum = 14,200 lb/hr

Total = 80,000 lb/hr

Product

$$\begin{aligned}\text{Equal Dry Weight of Gypsum} &= 33 \text{ tons/hour} \\ &= \underline{66,000 \text{ lb/hour}}\end{aligned}$$

2. BASIS OF EMISSION ESTIMATES

a. Particulate Matter (Baghouse Stack)

$$\text{Maximum Emission Rate} = 0.02 \text{ gr/dscf}$$

$$Q_s = 18,500 \text{ dscfm}$$

$$\frac{0.02 \text{ gr/dscf} \times 18,500 \text{ dscfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = \underline{3.17 \text{ lb/hr}}$$

$$3.17 \text{ lb/hr} \times \frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{13.9 \text{ tons/yr}}$$

Due to the high moisture content of the gypsum prior to the dryer, no emissions are expected from the handling operations.

b. Sulfur Dioxide

(1) No SO₂ from BPG & Reclaim

(2) (Deleted)

(3) N.G.

$$\text{AP-42 Factor} = 0.6 \text{ lb}/10^6 \text{ ft}^3$$

$$0.6 \text{ lb}/10^6 \text{ ft}^3 \times 0.029 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.017 \text{ lb/hr}}$$

$$.017 \text{ lb/hr} \times \frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{0.07 \text{ TPY}}$$

(4) Propane

AP-42 Factor = 0.095 lb/10³ gal

S = 0%

SO₂ = 0

c. Nitrogen Oxides

(1) No NO_x from BPG or Reclaim

(2) (Deleted)

(3) N.G.

AP-42 Factor = 140 lb/10⁶ft³

140 lb/10⁶ft³ x 0.029 10⁶ft³/hr = 4.1 lb/hr

4.1 lb/hr X 8760 hr/yr = 17.96TPY
2000 lb/ton

(4) Propane

Same as N.G.

d. Carbon Monoxide

(1) BPG & Reclaim do not release CO.

d. Carbon Monoxide (cont'd)

(2) (Deleted)

(3) N.G.

$$\text{AP-42 Factor} = 35 \text{ lb}/10^6 \text{ft}^3$$

$$35 \text{ lb}/10^6 \text{ft}^3 \times 0.029 \text{ } 10^6 \text{ft}^3/\text{hr} = \underline{1.02 \text{ lb/hr}}$$

$$\frac{1.02 \text{ lb/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{4.5 \text{ TPY}}$$

(4) Propane

Same as N.G.

e. Volatile Organic Compounds

(1) BPG & Reclaim do not release VOC.

(2) (Deleted)

(3) N.G.

$$\text{AP-42 Factor} = 2.8 \text{ lb}/10^6 \text{ft}^3$$

$$2.8 \text{ lb}/10^6 \text{ft}^3 \times 0.029 \text{ } 10^6 \text{ft}^3/\text{hr} = \underline{0.08 \text{ lb/hr}}$$

$$\frac{0.08 \text{ lb/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{0.35 \text{ TPY}}$$

(4) Propane

Same as N.G.

3. BASIS FOR POTENTIAL EMISSIONS

a. Particulate Matter

Sources of particulate matter emissions are BPG, Reclaim and Fuel Oil. Particulate matter after passing through the dryer enters a cyclone which recovers the dried gypsum from the conveying air stream. It is estimated that the cyclone will recover 95% of the dried gypsum.

Dry Gypsum = 33 tons/hr = 66,000 lb/hr

66,000 lb/hr X 0.05 = 3300 lb/hr

PM Potential Uncontrolled Emissions = 3300 lb/hr

3300 lb/hr X $\frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}}$ = 14,454 tons/yr

b. SO_x, NO_x, CO, VOC

No controls are planned. Potential uncontrolled emissions are the same as emissions.

4. CONTROL SYSTEM DETAILS

a. Baghouse

b. MAC Equipment, Inc.

Model 120RPT476

- c. Bags: 476, 12 oz/sq.yd. dacron polyester needled felt, 6" nominal diameter X 10 ft. long, 7901 ft² total.
- d. Cleaning Mechanism: Reverse jet
- e. A/C Ratio: 3.61/1
- f. See attached MAC Equipment bulletin for additional details.

5. CONTROL SYSTEM EFFICIENCY

From 3. above

Uncontrolled Particulate Emission Rate = 3300 lb/hr

From 2. above

Particulate emissions = 3.17 lb/hr (based on mfg. guarantee of 0.02 grains/dscf)

Required Efficiency

$$\frac{[3300 \text{ lb/hr} - 3.17 \text{ lb/hr}]}{3300} \times 100\% = \underline{\underline{99.9}}$$

Attachments

Cellotax Corp.

Steve Phillips

Mac Equipment Corp.

800-223-2191

File No: 90-1839-1W

It is proposed to construct a system to receive and store, transfer, grind and dry a blend of by-product gypsum (BPG) and reclaimed gypsum board (in-plant recycle only).

BPG will be received by truck from Jacksonville Electric Authority and stockpiled on-site in a covered storage area (see Figure 2). BPG will be delivered only during daytime hours, five days per week. Only that quantity of BPG necessary to operate through a weekend will be accumulated. It may be necessary occasionally to hold material for a short time (hours) on a concrete pad outside the covered storage. All material is received in a moist condition. Material temporarily stored outside will be moved into covered storage before it becomes dry enough to permit fugitive emission losses. BPG from the storage area will be introduced into the system via a hopper and belt conveyor (see Figure 3).

Unsaleable gypsum board from plant manufacturing operation is presently stockpiled on-site for recycling. The existing recycle handling system will be incorporated into the proposed system (see Figure 3). The reclaim gypsum will be added to the system on the belt conveyor from the BPG hopper. The combined reclaim gypsum and BPG (mixture) will be conveyed to a surge hopper for metering into the dryer system.

From the surge hopper, the mixture is fed into the Impact Mill (see Figure 4). In the Impact Mill the mixture is crushed and drying begins. Hot air is added at the Impact Mill to dry the mixture and to convey the ground material through the system. From this point to the Bucket Elevator the system is totally enclosed. Crushed mixture leaving the Impact Mill passes through a Classifier which separates oversize material and returns it to the Impact Mill.

Hot air is generated in the Air Heater. The Air Heater is equipped with a single burner capable of burning natural gas or propane (see Figure 5). The burner will have a rated output of 30×10^6 Btuh. The air from the air heater will be mixed with recycled air from the system prior to entering the Impact Mill.

From the Classifier the mixture is air conveyed to a Cyclone which separates most of the mixture from the conveying air. The removed mixture is passed out of the cyclone through an airlock into a closed screw conveyor. Exhaust air from the Cyclone returns to the System Fan.

From the System Fan a portion of the air is returned to the Impact Mill as a heat recovery measure. The remaining air enters the Baghouse. An emergency air relief valve is supplied in case of over-temperature conditions. In the Baghouse the remaining fines in the conveying air are removed. The removed mixture is discharged to the same enclosed Screw Conveyor serving the Cyclone. The exhaust air from the baghouse discharges through the Exhaust Fan into the Stack. The Stack is provided with a testing platform and sampling ports (see Figure 6).

From the Screw Conveyor the mixture enters a Bucket Elevator (see Figure 7). The Bucket Elevator transfers the mixture to the existing board production system. Potential dust from the Bucket Elevator will be controlled by exhausting air from the Bucket Elevator housing. The exhaust will be combined with the system conveying air at the entrance to the Baghouse.

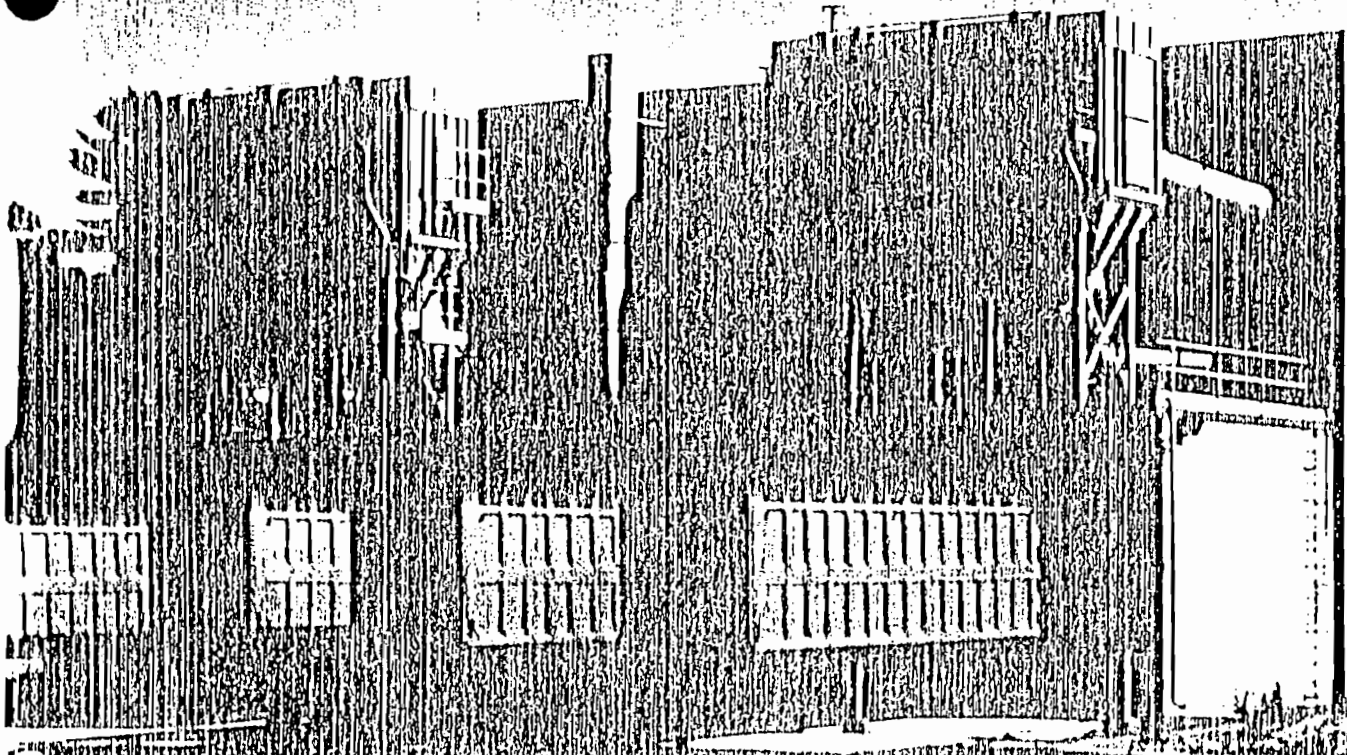
Justification for Non-NSR Status

The attached New Source Review (NSR) checklist (Table I) summarizes the results of determinations of applicability of pertinent questions establishing NSR requirements. Based on the checklist, the proposed facility modification is not subject to NSR.

Emissions for the existing facility and the proposed modification are summarized on attached Table II. Calculations of the existing facility emissions are also included. Emissions calculations for the proposed modifications are given in Section V.



RPT PULSE JET FILTERS



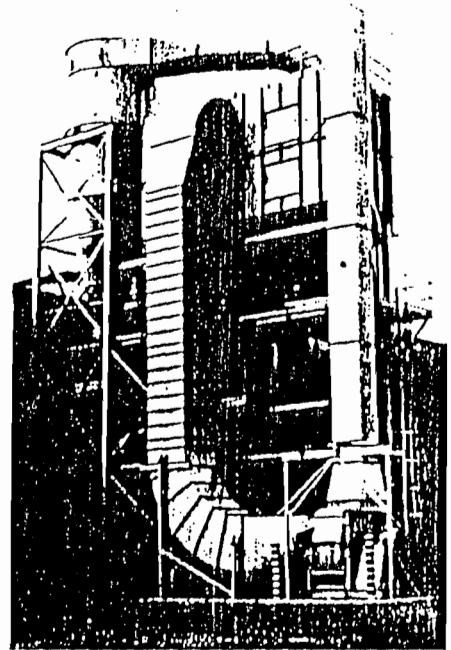
MAC RPT Pulse Jet Filter

The MAC RPT is a state of the art pulse jet filter which incorporates the latest bag cleaning technology in a filter design to be simple and readily maintainable. The RPT design includes a walk-in plenum, top bag (clean air side) removal and live bottom trough hoppers as standard equipment. To reduce your field installation costs, the MAC RPT is supplied with the header pipe, diaphragm valves and timer factory installed. Each row of bags is cleaned by a 1½" diaphragm air valve which is piped in the factory to a pilot solenoid valve. The solenoid is factory wired to an adjustable solid state timer.

RPT units are available in sizes ranging from 2789 sq. ft. of cloth to 8400 sq. ft. of cloth. Bag lengths are 10 ft. or 12 ft. The units may be manifolded to provide larger capacities. In multiple module installations, valving is available to provide for off-line cleaning or for maintenance isolation.

The RPT filter is furnished in welded sections with reinforced 12 ga. steel as standard construction suitable for 20" W.G. The tube sheet is of all welded 7 ga. construction. Filter housing and hopper thickness up to ¼" are available as required for certain applications.

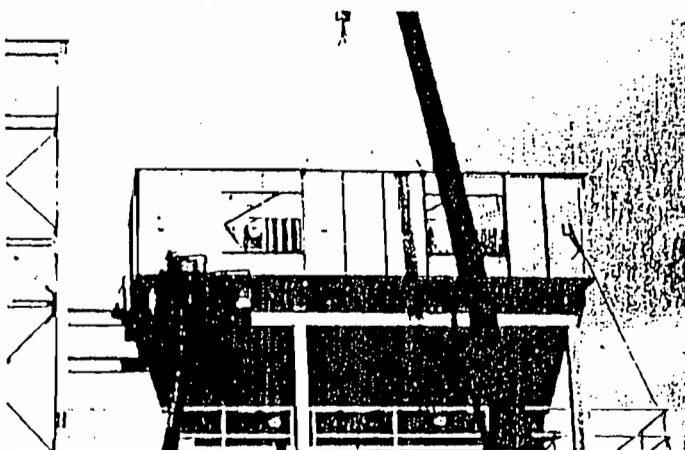
Bag cleaning is accomplished by use of 100 PSIG compressed air. Bag tops are protected from the air blast by use of the upper section of a venturi shape. Bag cages are of rigid wire construction. Standard bag fabrics are available for operation up to 550 degrees F.



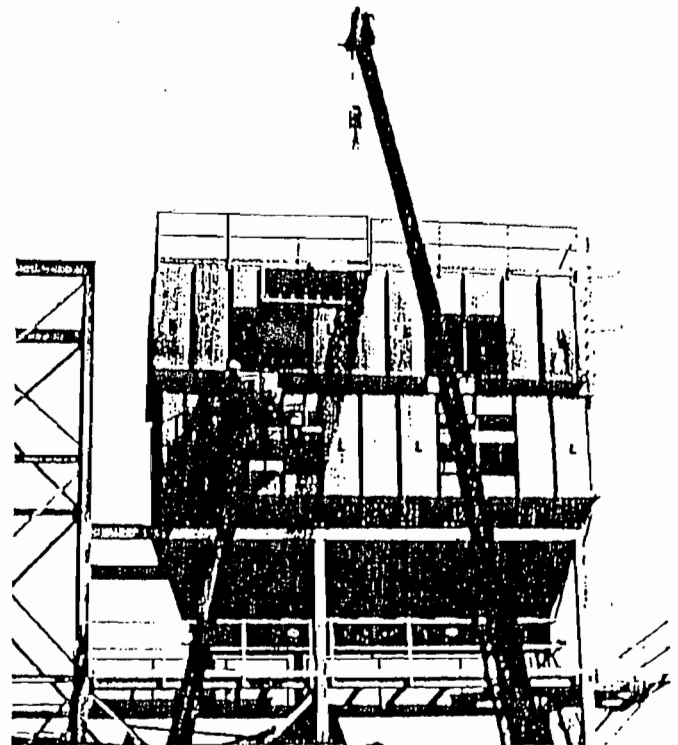
Hopper, Housing, and Plenum



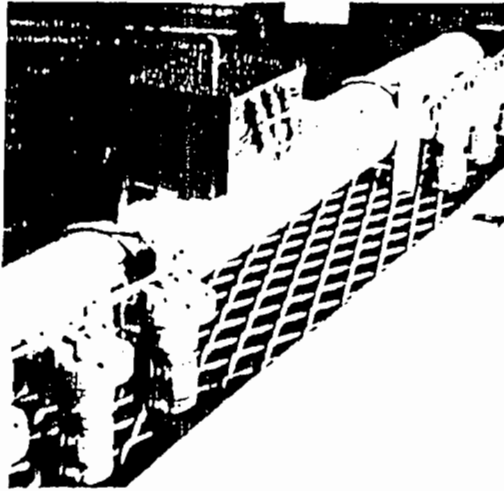
Hopper is placed on support steel.



Housing is set in place on hopper.



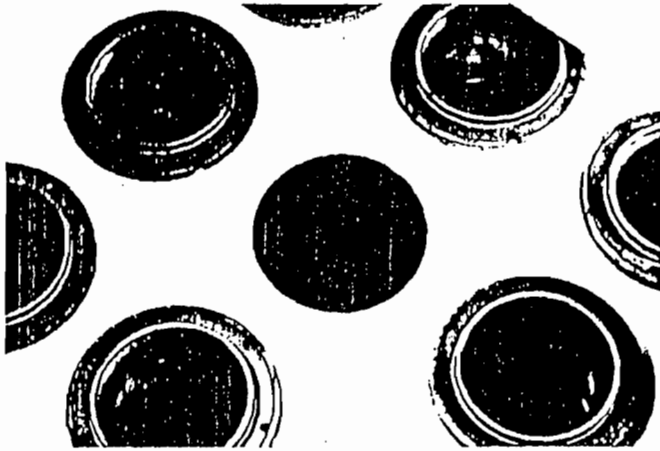
Plenum is installed.



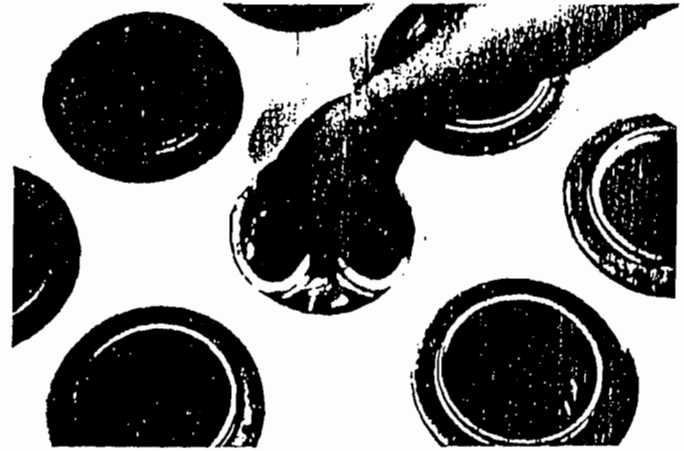
Features

- Factory prewired solenoid valves and timer.
- Shop installed piping for solenoids and diaphragm valves.
- External access to timer, solenoids and diaphragm valves.
- 1½" diaphragm valves for maximum cleaning energy.
- All welded plenum, housing and hopper.
- Walk-in clean air plenum and top bag removal.
- Rigid wire bag cages.
- Bolted manhole in hopper.
- Flanged inlet and outlet.
- Pressure differential gauge mounted on housing.
- Air pressure gauge mounted on air manifold.
- Hopper inlet diffuser baffle.
- 9" flared trough screw conveyor in trough hoppers.

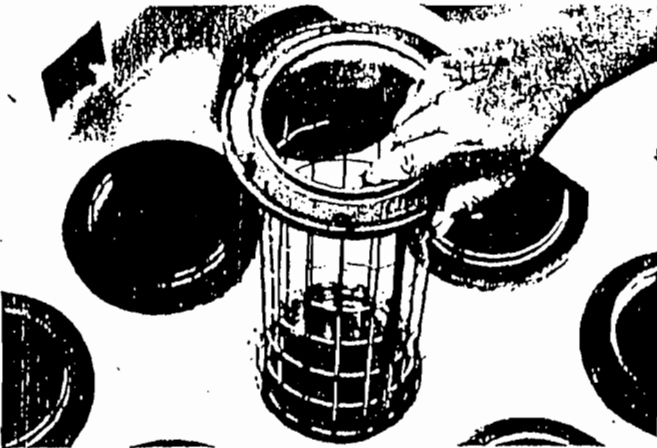
Top Bag Removal



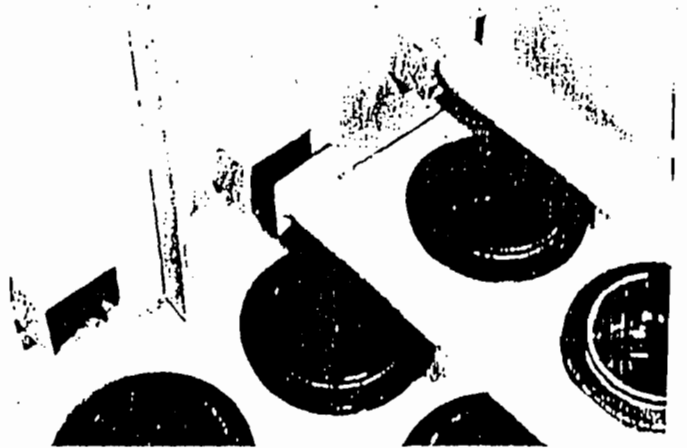
Step 1—Entry into the dirty side of the filter is unnecessary.



Step 2—Snap band with high profile lip seals secure the bag to the tube sheet.



Step 3—The cage snaps into place by merely lowering it into the bag and pushing down.

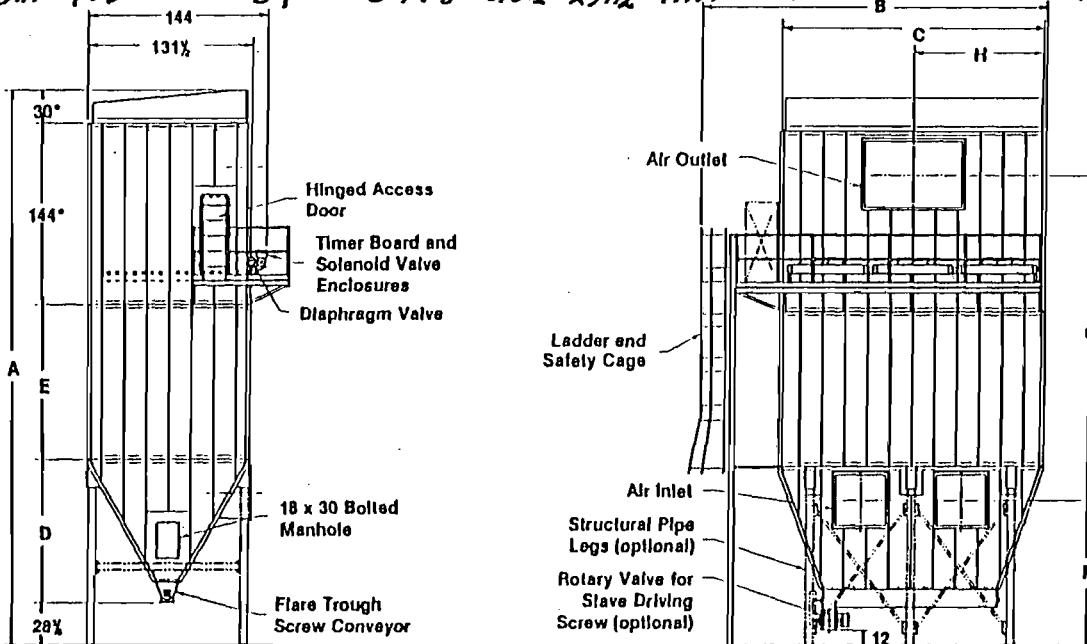


Step 4—The header pipes can only fit one way, thus insuring alignment of the blow nozzles.

Specifications

Filler Model	Sq. Ft. Cloth	Approx. Weight	A	B	C	D	E	F	G	H
120RPT168	2789	14245	372%	183½	104½	96%	104	97%	239	52¼
144RPT168	3360	15730	420%	183½	104½	96%	104	97%	268	52¼
120RPT196	3254	15930	387%	200½	121½	111%	104	111%	237½	60%
144RPT196	3920	17530	435%	200½	121½	111%	122	111%	266½	60%
120RPT224	3719	17400	389%	217½	138½	113%	104	112%	236½	69¼
144RPT224	4480	19110	437%	217½	138½	113%	122	112%	265½	69¼
120RPT252	4183	18890	389%	234½	155½	113%	104	111%	237½	77¼
144RPT252	5040	20710	437%	234½	155½	113%	122	111%	266%	77¼
120RPT280	4648	20630	389%	251½	172½	113%	104	116%	230	86¼
144RPT280	5600	22550	437%	251½	172½	113%	122	116%	259	86¼
120RPT308	5113	22090	389%	268½	189½	113%	104	115%	231	94¼
144RPT308	6160	24130	437%	268½	189½	113%	122	115%	260	94¼
120RPT336	5578	23580	389%	285½	206½	113%	104	114%	229½	103¼
144RPT336	6720	25730	437%	285½	206½	113%	122	114%	258½	103¼
120RPT364	6042	25100	389%	302½	223½	113%	104	113%	230	111¼
144RPT364	7280	27310	437%	302½	223½	113%	122	113%	259	111¼
120RPT392	6507	26540	389%	319½	240½	113%	104	112%	230	120¼
144RPT392	7840	28910	437%	319½	240½	113%	122	112%	259	120¼
120RPT420	6972	28060	389%	336½	257½	113%	104	111%	231	128¾
144RPT420	8400	30510	437%	336½	257½	113%	122	111%	260	128¾

120RPT476 7501 31,100 387½ 370½ 291½ 111¼ 104 " 233 145¾



*The fillers with 120° bags and cages do not have a bolted sloped roof section. The sloped roof is an integral part of the walk-in plenum. The overall height of the walk-in plenum becomes 144", and the 30° dimension does not apply.



Applications

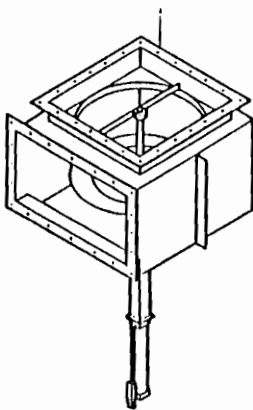
The MAC RPT has been utilized to control particulate emissions in a variety of industrial applications including foundry sand, grain dust, sander dust, rice, sugar, phosphorous, asbestos, barium metaborate, alumina, salt, gypsum, limestone, refuse derived fuels, soda ash, trisodium phosphate, coal, and many others.

Options

The following standard options are available on RPT filters:

- Outlet weatherhood
- Epoxy coating
- Level indicators
- Temperature controller
- Explosion vents
- Structural steel supports
- NEMA 4 & 9 enclosures
- Sprinkler taps
- Extended auger
- 304 S.S. construction

For other options consult factory.



Poppet Valve

The MAC Poppet Valve is designed to be used for module isolation in multiple module air pollution control systems for either "off-line" cleaning or maintenance. This valve will provide tight shut-off over a temperature range from 0 degrees F. to 550 degrees F.

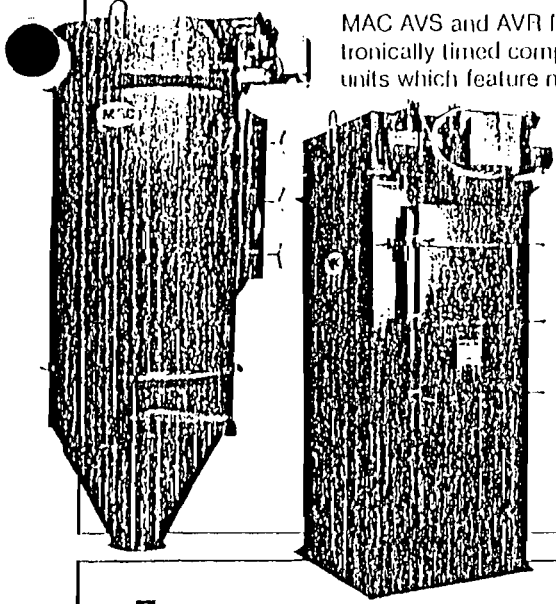
Uniform Bag Cleaning

In order to provide optimum pressure drop and bag life bag cleaning must be both instantaneous and uniform. The oscilloscope traces show the sharp pressure wave and its uniformity over the length of the filter bags in the RPT filter.



AVS and AVR Filters

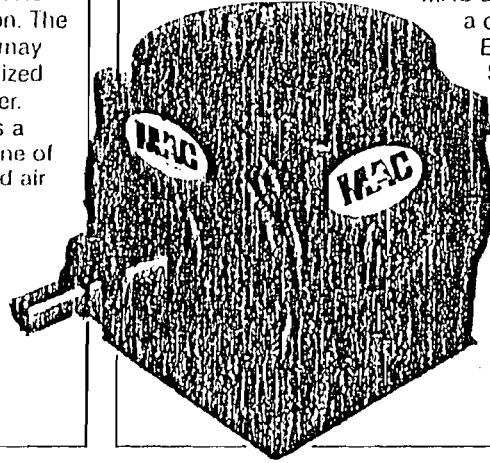
MAC AVS and AVR filters are electronically timed compressed air units which feature no moving parts construction. The MAC AVR may also be utilized as a receiver. MAC offers a complete line of compressed air units.



Airlocks

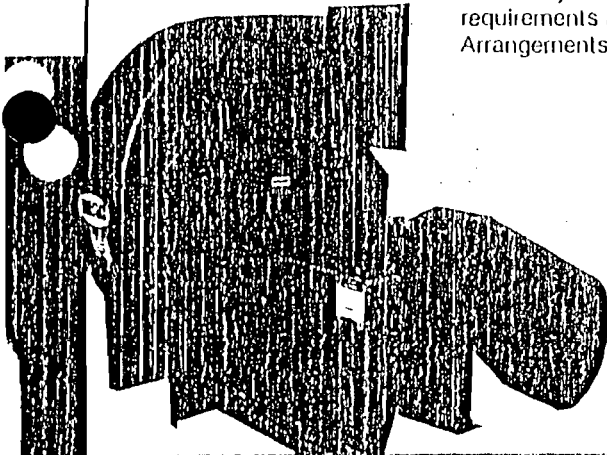
Pictured is the MAC Heavy Duty Airlock. Our line of Heavy Duty Airlocks are used in a variety of industries.

MAC also manufactures a complete line of High Efficiency Airlocks, No Shear Airlocks, and Light Duty Airlocks for your pneumatic conveying needs plus a complete line of airlock accessories.

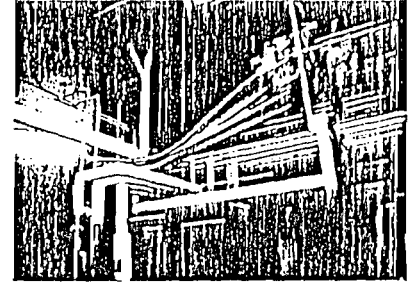


Fans

MAC has a complete line of Backward Inclined, High Static, Straight Bladed, and Material Handling Fans for your air handling requirements available in Arrangements 1, 4, and 9.



Pneumatic Conveying Systems



MAC Offers a complete line of valves, airlocks, blowers, filters, receivers and electrical control panels for your pneumatic conveying needs. MAC also offers a rail unload system and vacuum sequencing system to meet your applications. The picture above features line diverters conveying to two distinct locations, one being the pneumatic receiver to the left.

Contact MAC for your complete line of dilute and dense phase pneumatic conveying systems and components. Ask about our solution engineering services available. We also offer MAC Service Center for quick service on new equipment or replacement parts for your pneumatic conveying system.

MWP Dust Filter

The MAC Model MWP is a high-velocity, reverse-air dust filter designed to handle larger dust problems. It may be applied to a variety of operations, including hay, grain, flour, feed, and many other materials. The Model MWP requires no compressed air supply and may be used as either a dust filter or a pneumatic receiver.



MAC

MAC Equipment, Inc.
P.O. Box 205
Sapulpa, Kansas 66534
Call Toll Free 1-800-223-2181
Or In KS Call Collect (613) 284-2181
FAX 613-284-3569
4771167



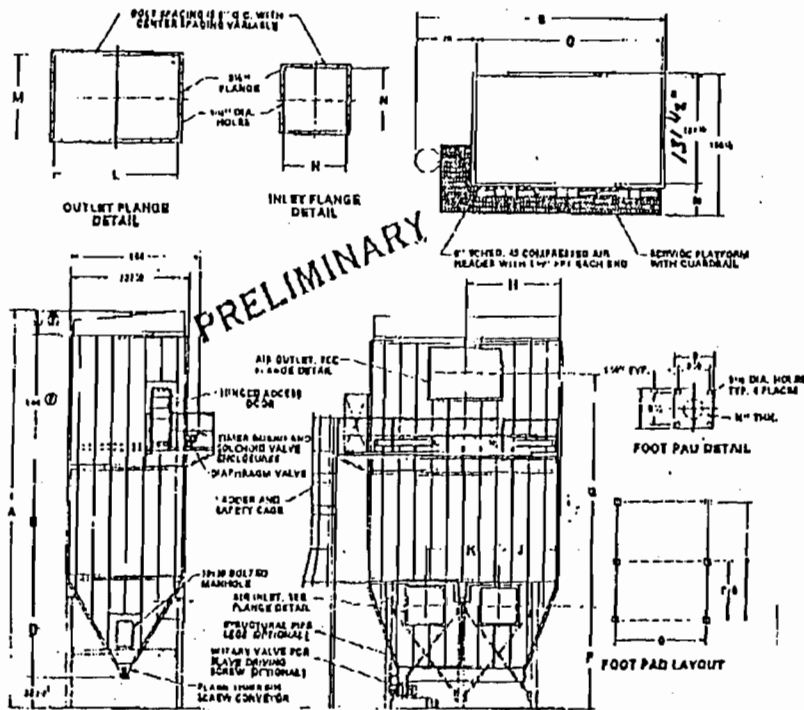
MAC

P.O. Box 209 • SAbins, Kansas 66524 • Toll Free 1-800-223-2191
or In Kansas Call Collect 813-284-2191
FAX 813-284-3444

SECTION **2**

DATA SHEET
PULSE JET FILTERS
Effective 7-15-88
Supersedes 8-1-86

RPT FILTER



- NOTES:**
- All dimensions are in inches.
 - Construction is 12 ga. C.S. with reinforcement ribs for 17\" W.C. differential pressure maximum.
 - Filter cleaning mechanism requires:
 - 100 PSIG of clean, dry plant air as required by application.
 - 105-115 volt A.C. single phase, 30-60 HZ power supply for filter and solenoid valve operation.
 - Filter sizes 144RPT252 and smaller have four legs, sizes 144RPT280 and above have six legs.
 - Filter sizes 144RPT252 and smaller have one inlet centered along the length of the hopper. Sizes 144RPT280 and above have two equal sized inlets located as illustrated.
 - On the RPT168 and RPT196 filters, the hopper is rotated 90° from the views shown.
 - The filters with 120\" bags and cages do not have a hinged sloped roof section. The sloped roof is an integral part of the walk-in plenum. The overall height of the walk-in plenum becomes 144\" and the 30\" dimension does not apply.

FILTER MODEL	SQ. FT.	APPROX. WEIGHT	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
120RPT168	2278	2216	202	183 1/4	104 1/2	96 1/2	104	97 1/2	250	53 1/2	--	--	84	34	40	91	77 1/2
144RPT168	3360	15730	420 1/2	183 1/4	104 1/2	96 1/2	104	97 1/2	250	53 1/2	--	--	84	34	40	91	77 1/2
120RPT196	2720	11880	307 1/2	200 1/2	121 1/4	111 1/2	122	111 1/2	268 1/2	60 1/2	--	--	60	39	42	108	79 1/2
144RPT196	3920	17530	435 1/2	200 1/2	121 1/4	111 1/2	122	111 1/2	268 1/2	60 1/2	--	--	60	39	42	108	79 1/2
120RPT224	3072	11700	307 1/2	217 1/4	138 1/4	111 1/2	122	110 1/2	269 1/2	69 1/2	--	--	66	40	44	114	74
144RPT224	4480	19110	435 1/2	217 1/4	138 1/4	111 1/2	122	110 1/2	269 1/2	69 1/2	--	--	66	40	44	114	74
120RPT252	3408	11880	307 1/2	234 1/4	155 1/4	111 1/2	122	109 1/2	266 1/2	77 1/2	--	--	66	43	46	114	111
144RPT252	5040	20710	435 1/2	234 1/4	155 1/4	111 1/2	122	109 1/2	266 1/2	77 1/2	--	--	66	43	46	114	111
120RPT280	3600	22350	435 1/2	251 1/4	172 1/4	111 1/2	122	114 1/2	359	86 1/2	84 1/2	64	72	48	36	114	128
144RPT280	5600	22350	435 1/2	251 1/4	172 1/4	111 1/2	122	114 1/2	359	86 1/2	84 1/2	64	72	48	36	114	128
120RPT308	3840	22080	307 1/2	268 1/4	189 1/4	111 1/2	122	113 1/2	260	94 1/2	58 1/2	72 1/2	72	48	38	114	145
144RPT308	6160	24130	435 1/2	268 1/4	189 1/4	111 1/2	122	113 1/2	260	94 1/2	58 1/2	72 1/2	72	48	38	114	145
120RPT336	4224	22080	307 1/2	285 1/4	206 1/4	111 1/2	122	112 1/2	258 1/2	103 1/2	62 1/2	81	78	53	40	114	162
144RPT336	6720	25730	435 1/2	285 1/4	206 1/4	111 1/2	122	112 1/2	258 1/2	103 1/2	62 1/2	81	78	53	40	114	162
120RPT364	4608	22350	307 1/2	302 1/4	223 1/4	111 1/2	122	111 1/2	269	111 1/2	67	87 1/2	82	54	42	114	179
144RPT364	7280	27310	435 1/2	302 1/4	223 1/4	111 1/2	122	111 1/2	269	111 1/2	67	87 1/2	82	54	42	114	179
120RPT392	5000	22350	307 1/2	319 1/4	240 1/4	111 1/2	122	110 1/2	259	120 1/2	71 1/2	98	86	56	44	114	196
144RPT392	7840	28910	435 1/2	319 1/4	240 1/4	111 1/2	122	110 1/2	259	120 1/2	71 1/2	98	86	56	44	114	196
120RPT420	5376	22080	307 1/2	336 1/4	257 1/4	111 1/2	122	109 1/2	260	128 1/2	75 1/2	106 1/2	76	56	46	114	213
144RPT420	8400	30510	435 1/2	336 1/4	257 1/4	111 1/2	122	109 1/2	260	128 1/2	75 1/2	106 1/2	76	56	46	114	213

STANDARD SPECIFICATIONS FOR MAC MODEL RPT REVERSE PULSE FILTER

Materials of Construction
12 ga. C.S. reinforced for 17\" W.C. Pull welded stainless steel reinforced skip welded interior.

Major Components
Walk-in plenum, bag house and hopper section. All inlets located in hopper w perforated diffuser panel.
Timing board inclusive IEMA 12 1/2\" diaphragm air valves.
Bag Cages. Combination venturi and hi down assembly polyurethane resin steel bags - snap band 12 oz. slinged polyester fabric.
Lifting hooks - 4 ea.
Pressure differential gauge kit
Ball on access door in hopper
Support brackets
V lines through euger
Service door and heater assembly service platform and guard rail
Ladder and safety cage
Air pressure gauge

Painting
Standard standard and metal propellant
Exterior and clean air plenum interior prim with two coat 32.5% zinc primer
Exterior to have one finish coat.
Color to be specified.
Standard color is MAC blue.
Alternate standard color is MAC white.

For more information see plot #D00368.
Information on this page subject to change without notice.

FILTER MODEL 120RPT476, 7901' CLOTH, APPROX. WT. 31100

"A" = 887 3/8 "Q" = 233 "N" = 50.
"B" = 370 1/2 "H" = 145 3/4 "O" = 114
"C" = 291 1/2 "J" = 83 1/2 "P" = 247
"D" = 111 1/4 "K" = 123 1/2
"E" = 104 "L" = 116
"F" = 111 3/4 "M" = 56

PRELIMINARY

BEST AVAILABLE COPY

Attachment D

FUEL DATA
JACKSONVILLE PLANT

<u>CONTENTS</u>	<u>AMERADA HESS #8 FUEL OIL</u>	<u>WARREN PETRO. PROPANE</u>	<u>PEOPLE'S GAS NATURAL GAS</u>
Sulfur	1.45%	0%	0.2 grams/100 cu.
Ash	.02%	0%	0%
Density	7.984 lb./gal.	0.116 lb./cu.ft. 60° F	0.045 lb./cu.ft. 60° F
Heat Capacity	149,506 BTU/gal.	2507 BTU/CF dry vapor	1030-1040 BTU/CF
Nitrogen	N/A	0%	0.4%

Contacts: Amerada Hess - 904/757-4498 - Richard
Warren Petroleum - 813/960-1500 - Mike
People's Gas - 904/739-1211 - Todd Widely

Tables

NEW SOURCE REVIEW (NSR) CHECKLIST

<u>Question and Rule</u>	<u>Pollutant (TPY)</u>					
	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
1. Is the existing facility a <u>major facility</u> as defined by 17-2.100 (113)? (>100 TPY)	Y(267)	Y(267)	Y(522)	Y(137)	N(18.1)	N(2.8)
2. Would the existing facility be subject to NSR review under 17-2.500(2)(d)2. if it were new? (>250 TPY) [17-2.500 (2)(d)4.a.(i)]	Y(267)	Y(267)	Y(522)	N(137)	N(18.1)	N(2.8)
3. Will the modification result in a significant net emissions increase (Table 500-2)? [17-2.500(2)(d)4.a.(ii)]	N(13.9) (>25)	N(13.9) (>15)	N(0.07) (>40)	N(17.96) (>40)	N(4.5) (>100)	N(0.35) (>40)
4. Would the modification in and of itself be subject to NSR review under 17-2.500(2)(d)2.? (>250) [17-2.500(2)(d)3.]	N(13.9)	N(13.9)	N(0.07)	N(17.96)	N(4.5)	N(0.35)
5. Is the modification subject to NSR review?						
a. 17-2.500(2)(d)3.	N/A	N/A	N/A	N/A	No	No
b. 17-2.500(2)(d)4.a.	No	No	No	No	N/A	N/A
c. 17-2.500(2)(d)4.b.	N/A	N/A	N/A	N/A	N/A	N/A
6. NSR required?	No	No	No	No	No	No

EMISSIONS SUMMARY FOR EXISTING FACILITY
AND PROPOSED MODIFICATION (TONS/YEAR)

<u>Source</u>	<u>Total Particulate Matter</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO₂</u>	<u>CO</u>	<u>VOC</u>
Existing Facility	267.22	267.22	521.8	137.0	18.1	2.8
Modification	13.9	13.9	0.07	17.96	4.5	0.35

Determine Present Emissions from the Existing Facility

1. Total Particulate Matter from Operating Permits

A016 - 107130	Ore crushing and conveying	21.9 TPY
A016 - 107127	Calcining kettles & material handling	172.6 TPY
A016 - 107128	Kettle fireboxes	14.4 TPY
A016 - 107131	Material handling and storage bins	21.9 TPY
A016 - 107129	Wallboard Dryer (based on 3-4-91 corrections)	14.52 TPY
A016 - 107097	Wallboard End Trim	<u>21.9 TPY</u>
		267.22 TPY

2. PM₁₀

Assume all PM emissions are less than 10 microns particle size, therefore, emissions are the same as total particulate matter.

3. Sulfur Dioxide

SO₂ emissions are maximum when firing fuel oil. Fuel oil has permitted maximum S = 1.8%.

Permitted Maximum Heat Inputs:

<u>Wallboard Dryer</u>	(Fuel Oil):	30 X 10 ⁶ Btuh	
	(Natural Gas Only)		60 X 10 ⁶ Btuh
<u>Kettle Fireboxes</u>	(Fuel Oil):	<u>33 X 10⁶ Btuh</u>	
	Total	63 X 10 ⁶ Btuh	60 X 10 ⁶ Btuh

$$\text{Fuel Oil Quantity} = \frac{63 \times 10^6 \text{ Btuh}}{1.49506 \times 10^5 \text{ Btuh/gal}} = \underline{421.4 \text{ gal/hr}}$$

$$\text{AP-42 Factor for SO}_2 \text{ from fuel oil} = 1578 \frac{\text{lb SO}_2}{10^3 \text{ gal}}$$

$$\frac{157 (1.8) \frac{\text{lb SO}_2}{10^3 \text{ gal}} \times 0.4214 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{521.6 \text{ tons/yr}}$$

AP-42 Factor for SO₂ = 0.6 lb/10⁶ft³
from Natural Gas

$$\frac{60 \times 10^6 \text{ Btuh} \times 0.6 \text{ lb/10}^6 \text{ ft}^3 \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = \underline{0.02 \text{ TPY}}$$

Total SO₂ = 521.8 TPY

4. Nitrogen Oxides

AP-42 Factor for NO_x = 55 lb/10³gal
for Fuel Oil

AP-42 Factor for NO_x = 140 lb/10⁶Ft³
for Natural Gas

Fuel Oil:

$$\frac{55 \text{ lb/10}^3 \text{ gal} \times 0.4214 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = 101.5 \text{ TPY}$$

Natural Gas:

$$\frac{140 \text{ lb/10}^6 \text{ ft}^3 \times 60 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = 35.5 \text{ TPY}$$

Total NO_x = 137.0 TPY

5. Carbon Monoxide

AP-42 Factor for CO = 5 lb/10³gal
for Fuel Oil

AP-42 Factor for CO = 35 lb/10⁶Ft³
for Natural Gas

Fuel Oil:

$$\frac{5 \text{ lb/10}^3 \text{ gal} \times 0.4214 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = 9.2 \text{ TPY}$$

Natural Gas:

$$\frac{35 \text{ lb/10}^6 \text{ ft}^3 \times 60 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = 8.9 \text{ TPY}$$

Total CO = 18.1 TPY

6. VOC

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Fuel Oil}} = 1.13 \text{ lb}/10^3 \text{ gal}$$

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Natural Gas}} = 2.8 \text{ lb}/10^6 \text{ ft}^3$$

Fuel Oil:

$$\frac{1.13 \text{ lb}/10^3 \text{ gal} \times 0.4214 \times 10^3 \text{ gal/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = 2.1 \text{ TPY}$$

Natural Gas:

$$\frac{2.8 \text{ lb}/10^6 \text{ ft}^3 \times 60 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh}/10^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = 0.7 \text{ TPY}$$

$$\text{Total VOC} = \underline{2.8 \text{ TPY}}$$

Figures

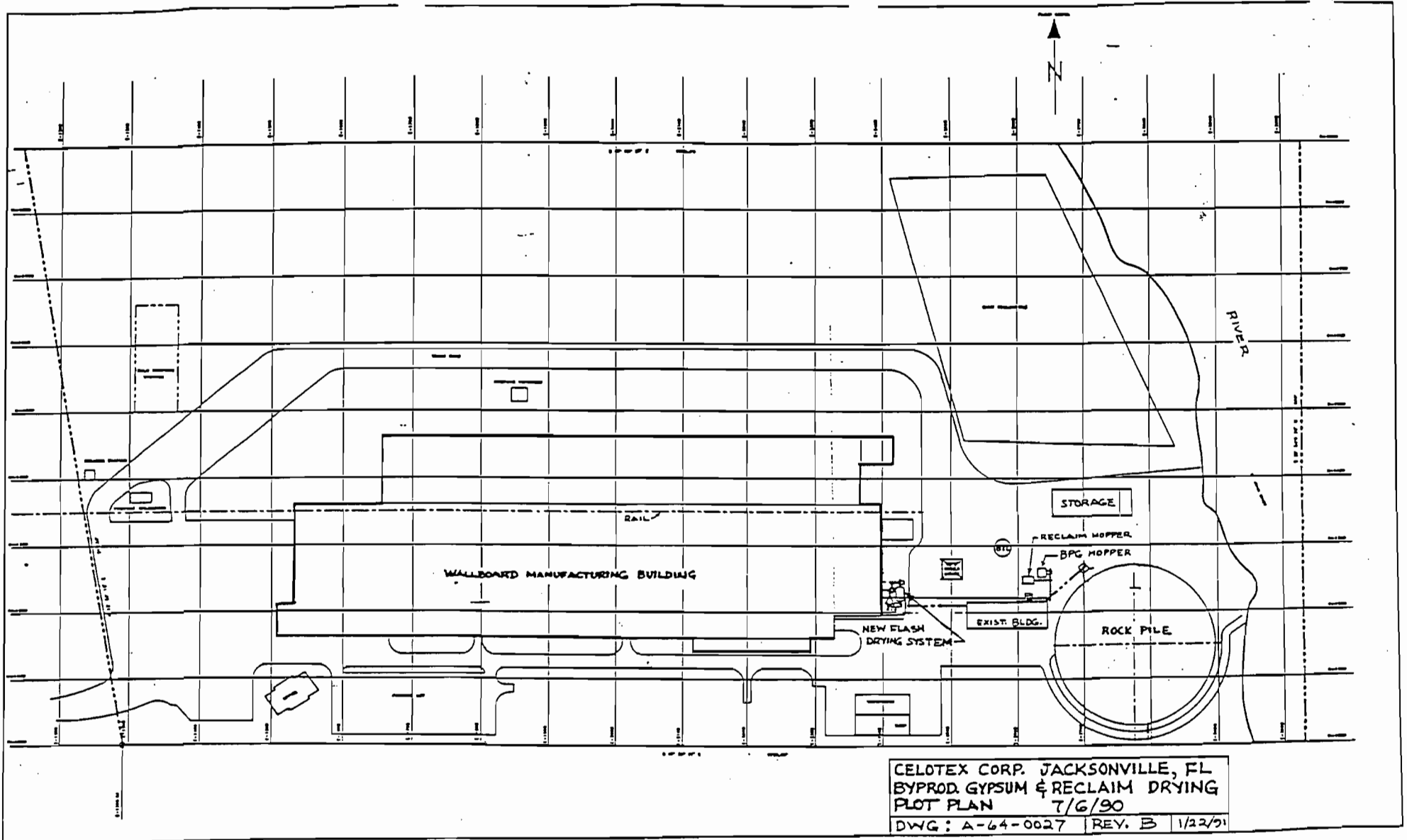


FIGURE 1

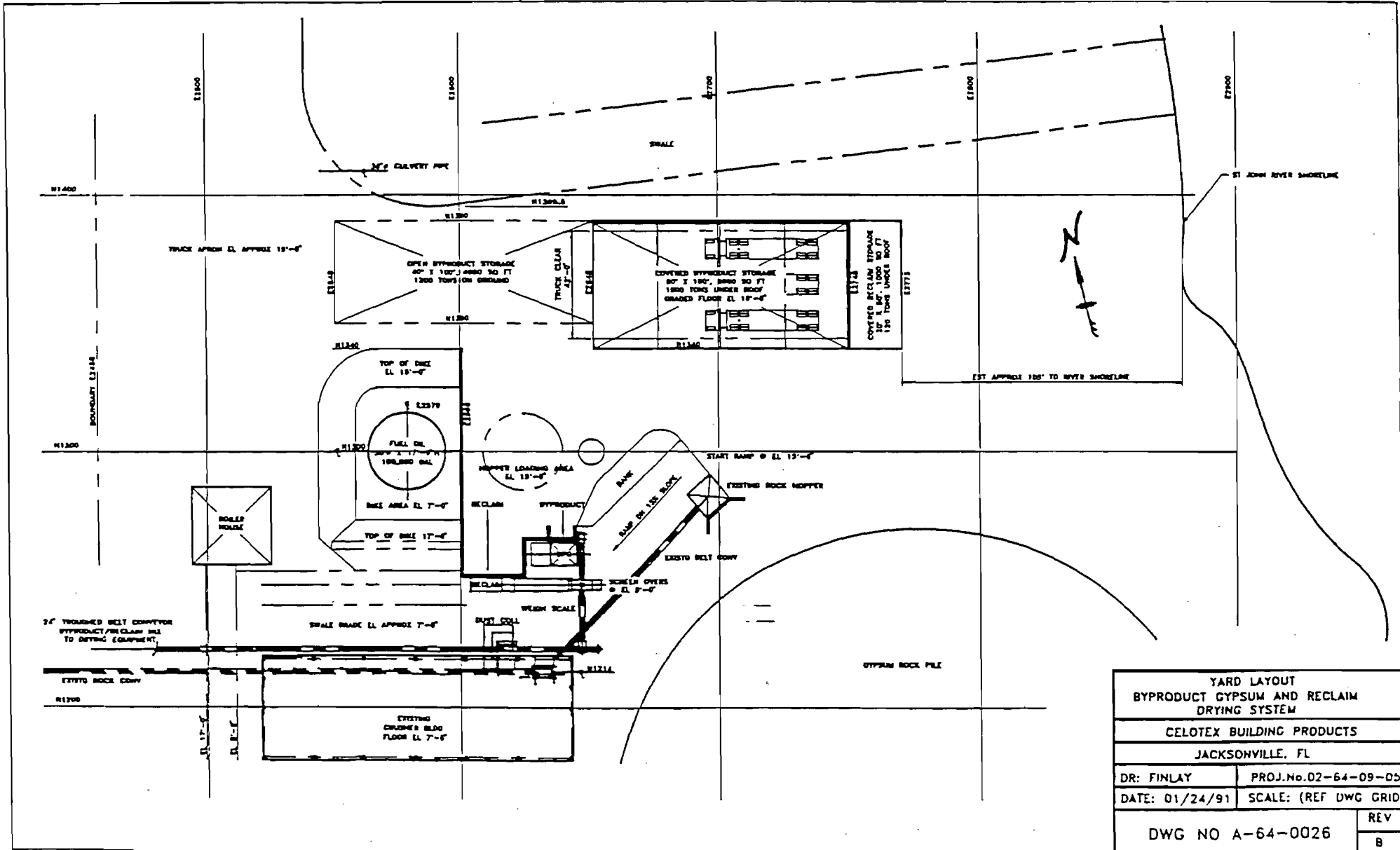


FIGURE 2

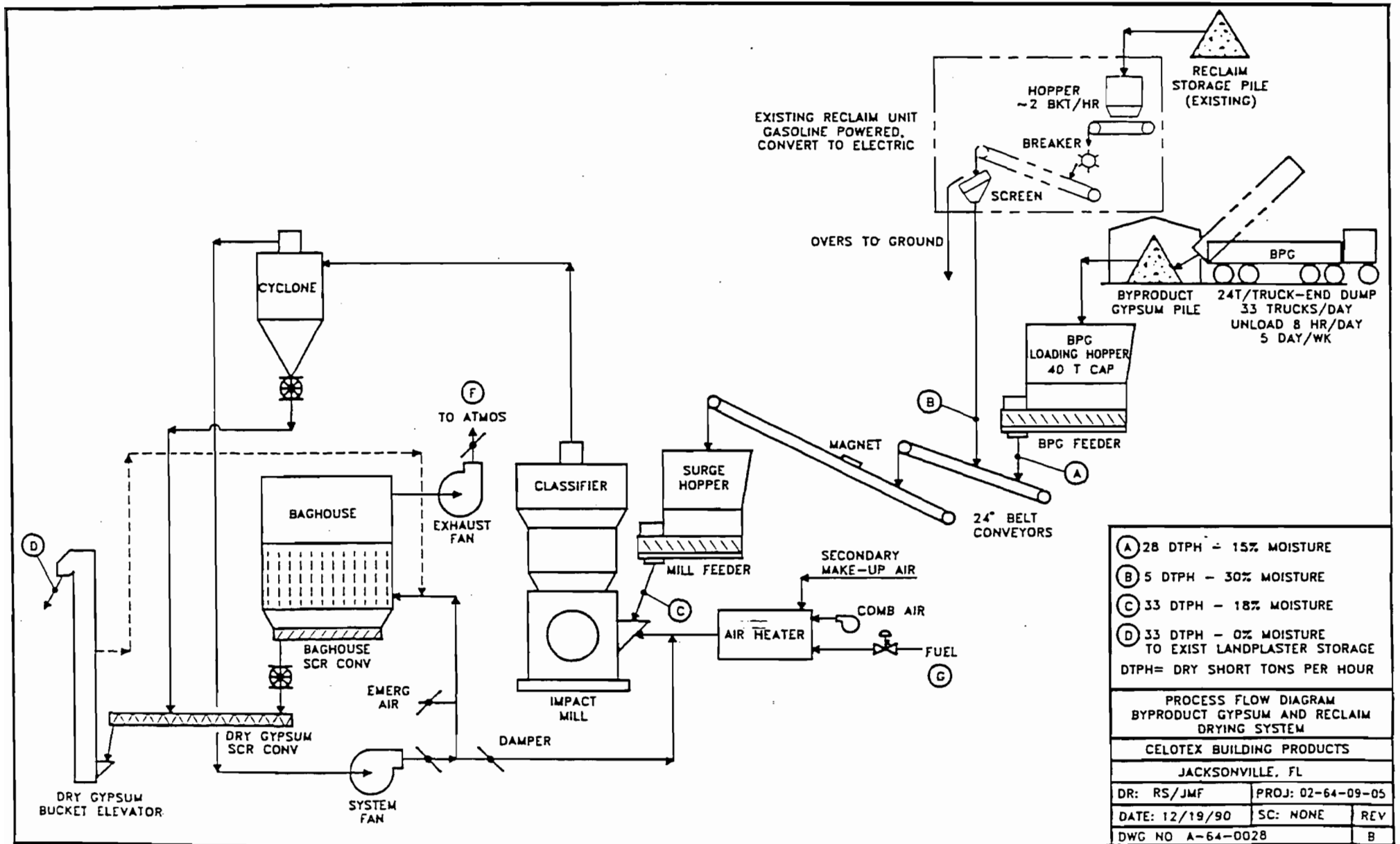
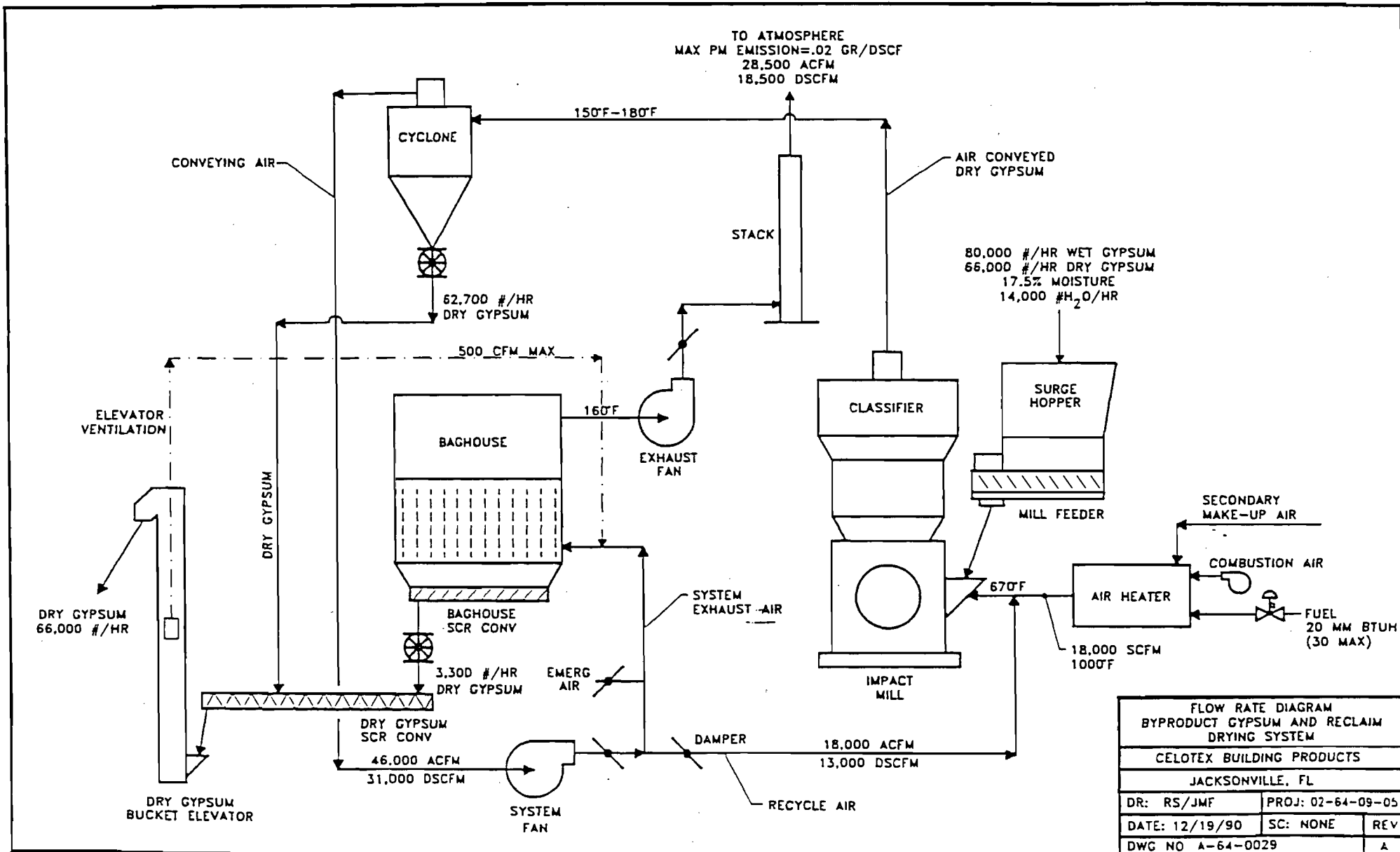
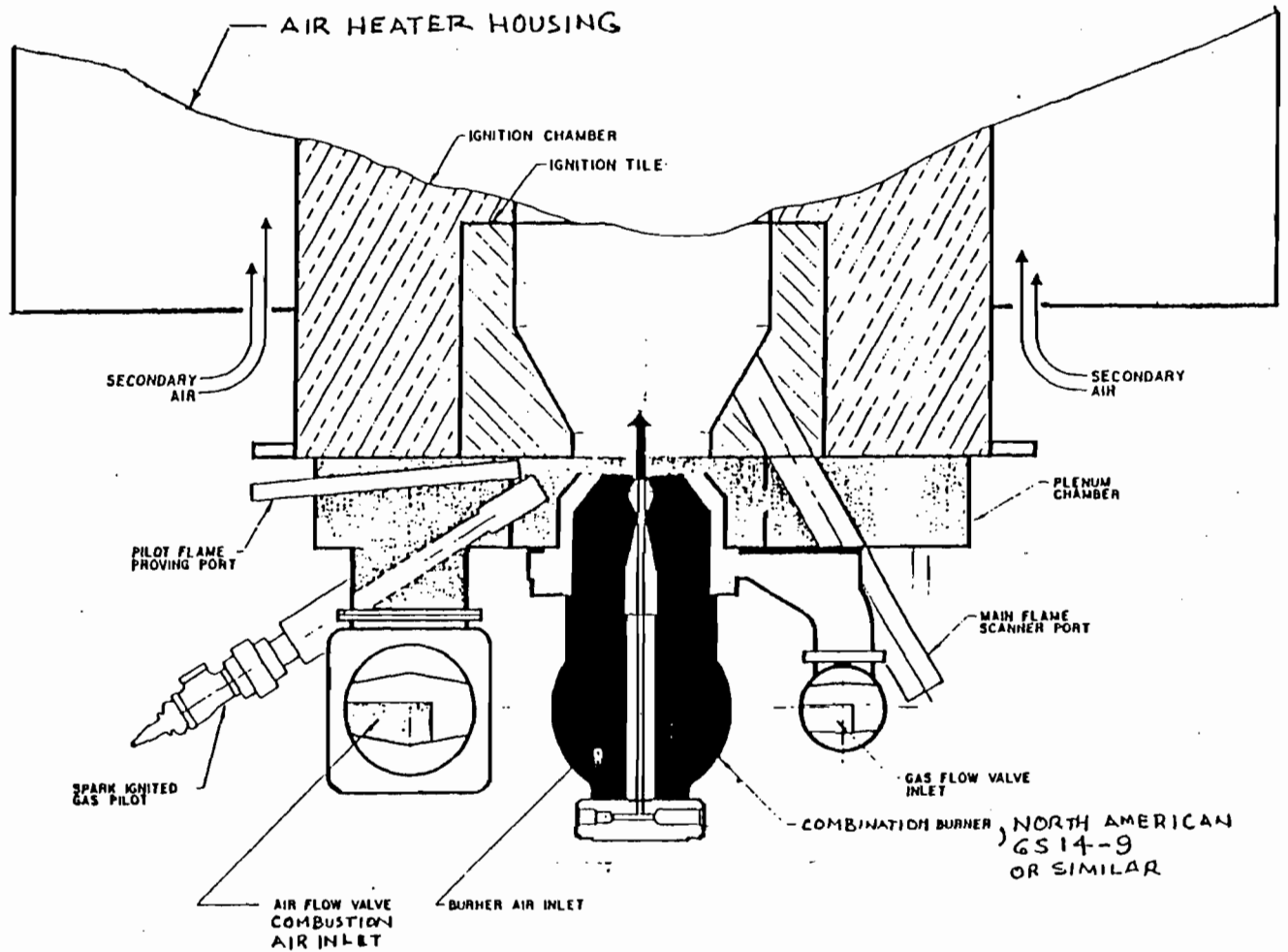


FIGURE 3



FLOW RATE DIAGRAM BYPRODUCT GYPSUM AND RECLAIM DRYING SYSTEM		
CELOTEX BUILDING PRODUCTS		
JACKSONVILLE, FL		
DR: RS/JMF	PROJ: 02-64-09-05	
DATE: 12/19/90	SC: NONE	REV
DWG NO A-64-0029	A	

FIGURE 4



AIR HEATER BURNER SCHEMATIC	
BPG & RECLAIM DRYING SYSTEM CELOTEX BUILDING PRODUCTS JACKSONVILLE, FL	
DATE: 11/8/90	DR: F.G.
DWG: A-64-0025	REV. B

12/18/90

FIGURE 5

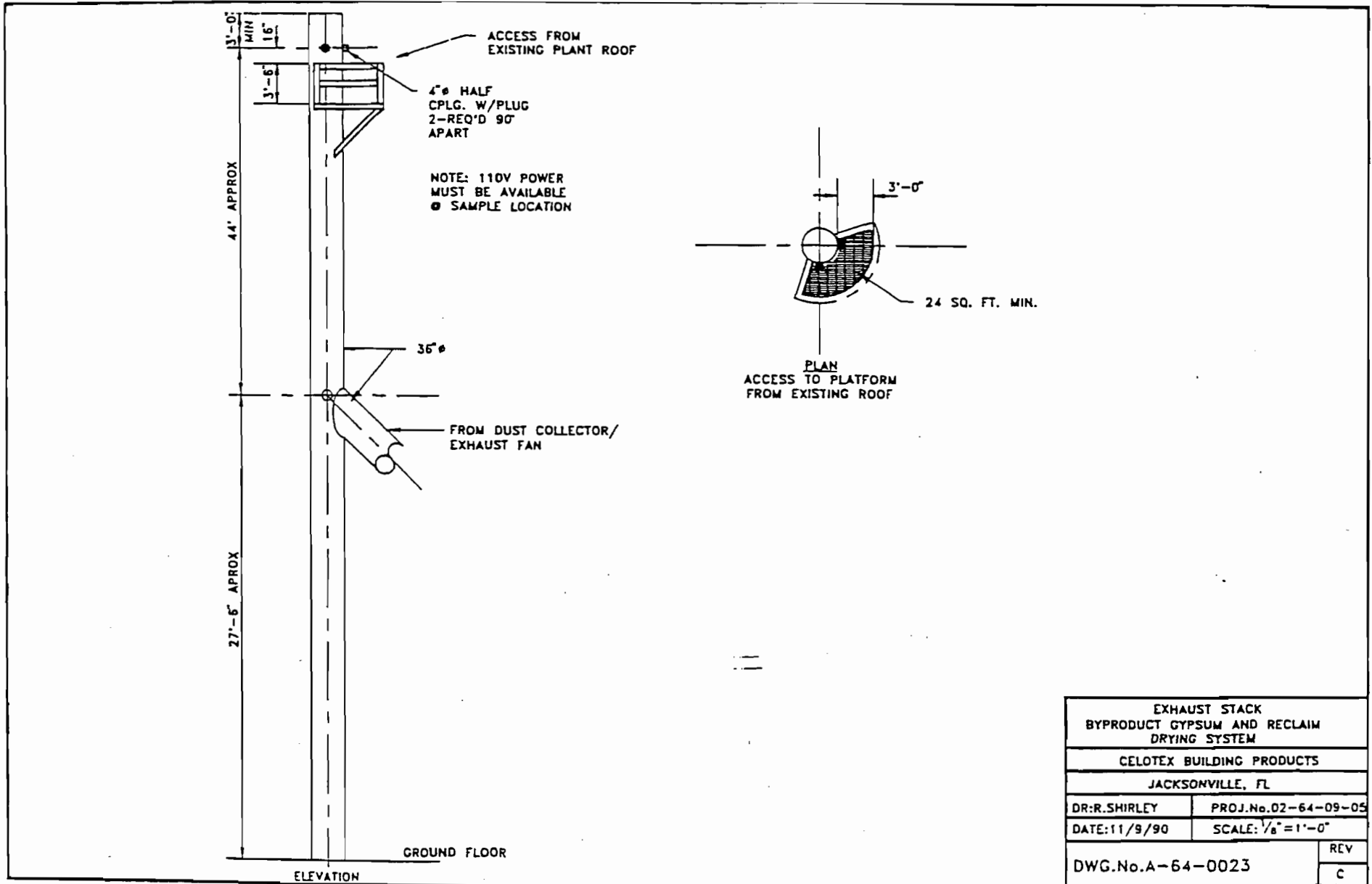
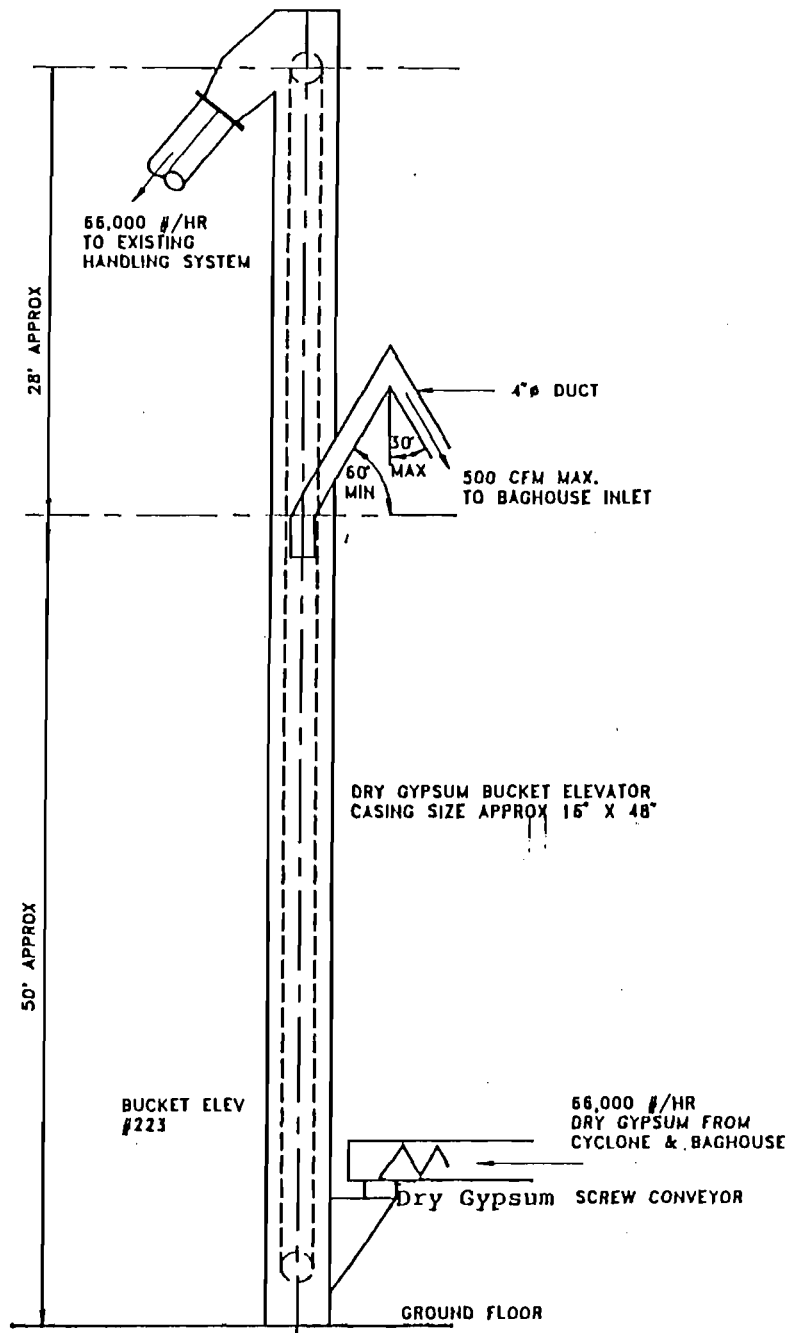


FIGURE 6



ELEVATION

DRY GYPSUM BUCKET ELEVATOR VENTILATION BYPRODUCT GYPSUM AND RECLAIM DRYING SYSTEM	
CELOTEX BUILDING PRODUCTS	
JACKSONVILLE, FL	
DR: R. SHIRLEY	PROJ: 02-64-09-05
DATE: 11/9/90	SCALE: 1/8" = 1'-0"
DWG NO A-64-0024	REV B

FIGURE 7

NSPS

(Approved by the office of Management and Budget under control number 2080-0120)

§ 60.648 Optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure.¹

(a) When an instantaneous sample is desired and H_2S concentration is ten grains per 100 cubic foot or more, a 100 ml Tutwiler burette is used. For concentrations less than ten grains, a 500 ml Tutwiler burette and more dilute solutions are used. In principle, this method consists of titrating hydrogen sulfide in a gas sample directly with a standard solution of iodine.

(b) *Apparatus.* (See Figure 1.) A 100 or 500 ml capacity Tutwiler burette, with two-way glass stopcock at bottom and three-way stopcock at top which connect either with inlet tubulature or glass-stoppered cylinder, 10 ml capacity, graduated in 0.1 ml subdivision; rubber tubing connecting burette with levelling bottle.

(c) *Reagents.* (1) Iodine stock solution, 0.1N. Weight 12.7 g iodine, and 20 to 25 g cp potassium iodide for each liter of solution. Dissolve KI in as little water as necessary; dissolve iodine in concentrated KI solution, make up to proper volume, and store in glass-stoppered brown glass bottle.

(2) Standard iodine solution, 1 ml = 0.001771 g I. Transfer 33.7 ml of above 0.1N stock solution into a 250 ml volumetric flask; add water to mark and mix well. Then, for 10 ml sample of gas, 1 ml of standard iodine solution is equivalent to 100 grains H_2S per cubic foot of gas.

(3) Starch solution. Rub into a thin paste about one teaspoonful of wheat starch with a little water; pour into

about a pint of boiling water; stir; let cool and decant off clear solution. Make fresh solution every few days.

(d) *Procedure.* Fill leveling bulb with starch solution. Raise (L), open cock (G), open (F) to (A), and close (F) when solutions starts to run out of gas inlet. Close (G). Purge gas sampling line and connect with (A). Lower (L) and open (F) and (G). When liquid level is several ml past the 100 ml mark, close (G) and (F), and disconnect sampling tube. Open (G) and bring starch solution to 100 ml mark by raising (L); then close (G). Open (F) momentarily, to bring gas in burette to atmospheric pressure, and close (F). Open (G), bring liquid level down to 10 ml mark by lowering (L). Close (G), clamp rubber tubing near (E) and disconnect it from burette. Rinse graduated cylinder with a standard iodine solution (0.00171 g I per ml); fill cylinder and record reading. Introduce successive small amounts of iodine thru (F); shake well after each addition; continue until a faint permanent blue color is obtained. Record reading; subtract from previous reading, and call difference D.

(e) With every fresh stock of starch solution perform a blank test as follows: Introduce fresh starch solution into burette up to 100 ml mark. Close (F) and (G). Lower (L) and open (G). When liquid level reaches the 10 ml mark, close (G). With air in burette, titrate as during a test and up to same end point. Call ml of iodine used C. Then,

Grains H_2S per 100 cubic foot of gas = $100 \frac{C}{D-C}$

(f) Greater sensitivity can be attained if a 500 ml capacity Tutwiler burette is used with a more dilute (0.001N) iodine solution. Concentrations less than 1.0 grains per 100 cubic foot can be determined in this way. Usually, the starch-iodine end point is much less distinct, and a blank determination of end point, with H_2S -free gas or air, is required.

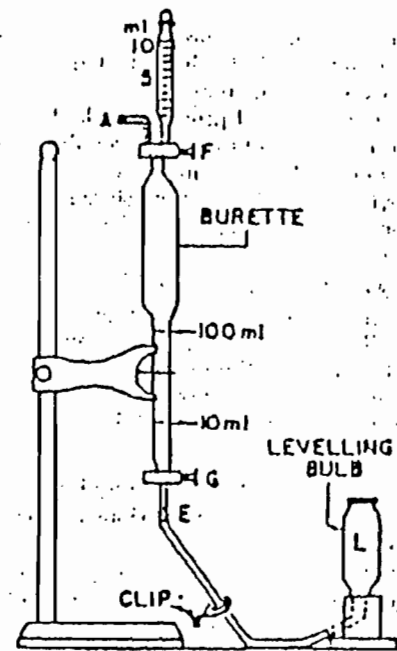


Figure 1. Tutwiler burette (lettered items mentioned in text).

Subparts MMM through NNN
[Reserved]

[Subparts MMM — NNN added and reserved by 50 FR 7699, February 25, 1985]

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

[Subpart OOO added by 50 FR 31337, August 1, 1985]

§60.670 Applicability and designation of affected facility.

(a) Except as provided in paragraphs (b), (c) and (d) of this section, the

¹ Gas Engineers Handbook, Fuel Gas Engineering Practices, The Industrial Press, 93 Worth Street, New York, N.Y., 1960, First Edition, Second Printing, page 6725 (Docket A-60-20-A, Entry II-1-67).

[Sec. 60.670(a)]

provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

(b) An affected facility that is subject to the provisions of Subpart F or I or that follows in the plant process any facility subject to the provisions of Subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 138 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator seeking to comply with this paragraph shall comply with the reporting requirements of §60.670(a) and (b).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after

August 31, 1983 is subject to the requirements of this part.

§60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in Subpart A of this part.

"Bagging operation" means the mechanical process by which bags are filled with nonmetallic minerals.

"Belt conveyor" means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

"Bucket elevator" means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

"Building" means any frame structure with a roof.

"Capacity" means the cumulative rated capacity of all initial crushers that are part of the plant.

"Capture system" means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more process operations to a control device.

"Control device" means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more process operations at a nonmetallic mineral processing plant.

"Conveying system" means a device for transporting materials from one piece of equipment or location to another location within a plant.

Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

"Crusher" means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

"Enclosed truck or railcar loading station" means that portion of a

nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

"Fixed plant" means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbucket, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

"Fugitive emission" means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

"Grinding mill" means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

"Initial crusher" means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

"Nonmetallic mineral" means any of the following minerals or any mixture of which the majority is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(b) Sand and Gravel.

(c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(d) Rock Salt.

(e) Gypsum.

(f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and Pyrophyllite.

(j) Boron, including Borax, Kernite, and Colemanite.

(k) Barite.

(l) Fluorospars.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

[Sec. 60.671]

(r) *Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.*

"Nonmetallic mineral processing plant" means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

"Portable plant" means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

"Production line" means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

"Screening operation" means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).

"Size" means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

"Stack emission" means the particulate matter that is released to the atmosphere from a capture system.

"Storage bin" means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

"Transfer point" means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

"Truck dumping" means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

"Vent" means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

§ 60.672 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

(1) Contain particulate matter in excess of 0.05 g/dscm; or

(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device. Facilities using a wet scrubber must comply with the reporting provisions of § 60.670 (c), (d), and (e).

(b) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity, except as provided in paragraphs (c), (d) and (e) of this section.

(c) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor or belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in § 60.671.

(2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(a) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accord-

[Sec. 60.674(a)]

ance with manufacturer's instructions.

(b) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

§ 60.675 Test methods and procedures.

[60.675 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.9(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.272(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) In determining compliance with the particulate matter standards in § 60.672 (b) and (c), the owner or operator shall use Method 9 and the procedures in § 60.11, with the following additions:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(d) In determining compliance with § 60.072(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required § 60.676(c) using the monitoring devices in § 60.674 (a) and (b) during each particulate matter run and shall determine the averages.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in tons of the existing storage bin being replaced and

(ii) The rated capacity in tons of replacement storage bins.

(b) Each owner or operator seeking to comply with § 60.670(d) shall submit the following data to the Director of the Emission Standards and Engineering Division, (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

(1) The information described in § 60.676(a).

(2) A description of the control device used to reduce particulate matter emissions from the existing facility and a list of all other pieces of equipment controlled by the same device; and

(3) The estimated age of the existing facility.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ± 30 percent from the average determined during the most recent performance test.

[60.676(d) amended by 54 FR 6662, February 14, 1989]

(e) The reports required under paragraph (d) shall be postmarked within 30 days following end of the second and fourth calendar quarters.

[Sec. 60.676(e)]

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with §60.672 (b) and (c) and reports of observations using Method 22 to demonstrate compliance with §60.672(e).

(g) The requirements of this paragraph remain in force until and unless the Agency, in delegating enforcement authority to a State under Section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with paragraphs (a), (c), (d), (e), and (f) of this subsection, provided that they comply with requirements established by the State. Compliance with paragraph (b) of this section will still be required.

[Approved by the Office of Management and Budget under control number 2060-0050]

Subpart PPP—Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

[Subpart PPP added by 50 FR 7699, February 25, 1985]

§60.680 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each rotary spin wool fiberglass insulation manufacturing line.

(b) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after February 7, 1984, is subject to the requirements of this subpart.

§60.681 Definitions.

"As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

"Glass pull rate" means the mass of molten glass utilized in the manufacture of wool fiberglass insulation at a single manufacturing line in a specified time period.

"Manufacturing line" means the manufacturing equipment comprising the form-

ing section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

"Rotary spin" means a process used to produce wool fiberglass insulation by forcing molten glass through numerous small orifices in the side wall of a spinner to form continuous glass fibers that are then broken into discrete lengths by high velocity air flow.

"Wool fiberglass insulation" means a thermal insulation material composed of glass fibers and made from glass produced or melted at the same facility where the manufacturing line is located.

§ 60.682 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

§ 60.683 Monitoring of operations.

(a) An owner or operator subject to the provisions of this subpart who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascals (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.

(b) An owner or operator subject to the provisions of this subpart who uses a wet electrostatic precipitator control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the primary and secondary current (amperes) and voltage in each electrical field and the inlet water flow rate. In addition, the owner or operator shall determine the total residue (total solids) content of the water entering the control device once per day using Method 209A, "Total Residue Dried at 103-105 °C,"

In *Standard Methods for the Examination of Water and Wastewater*, 15th Edition, 1980 (incorporated by reference—see § 60.17). Total residue shall be reported as percent by weight. All monitoring devices required under this paragraph are to be certified by their manufacturers to be accurate within ± 5 percent over their operating range.

(c) All monitoring devices required under this section are to be recalibrated quarterly in accordance with procedures under § 60.13(b).

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

§ 60.684 Recordkeeping and reporting requirements.

(a) At 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(a).

(b) At 30-minute intervals during each 2-hour test run of each performance test of a wet electrostatic precipitator control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(b), except that the concentration of total residue in the water shall be recorded once during each performance test and once per day thereafter.

(c) Records of the measurements required in paragraphs (a) and (b) of this section must be retained for at least 2 years.

(d) Each owner or operator shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraphs (a) and (b) of this section and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in § 60.683(c). For the purpose of these reports, exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent performance test.

(e) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of com-

[Sec. 60.604(c)]

pliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

(Approved by the Office of Management and Budget under control number 2000-0002)

§ 60.685 Test methods and procedures.

[§ 60.685 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.6, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.6(b).

(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.

(c) The owner or operator shall determine compliance with the particulate matter standard in § 60.602 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (C_e Q_e) / (P_{avg} K)$$

where:

E = emission rate of particulate matter, kg/Mg (lb/ton).

C_e = concentration of particulate matter, g/dscm (g/dscf).

Q_e = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P_{avg} = average glass pull rate, Mg/hr (ton/hr).

K = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5E shall be used to determine the particulate matter concentration (C_e) and the volumetric flow rate (Q_e) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90 dscf).

(3) The average glass pull rate (P_{avg}) for the manufacturing line shall be the arithmetic average of three glass pull rate (P_i) determinations taken at intervals of at least 30 minutes during each run.

The individual glass pull rates (P_i) shall be computed using the following equation:

$$P_i = K' L_i W_m M [1.0 - (LOI/100)]$$

where:

P_i = glass pull rate at interval "i", Mg/hr (ton/hr).

L_i = line speed, m/min (ft/min).

W_m = trimmed mat width, m (ft).

M = mat gram weight, g/m² (lb/ft²).

LOI = loss on ignition, weight percent.

K' = conversion factor, 8 × 10⁻⁶ (min-Mg) / (hr-g) [3 × 10⁻⁶ (min-ton) / (hr-lb)]

(i) ASTM Standard Test Method D2504-00 (Reapproved 1070) (incorporated by reference—see § 60.17), shall be used to determine the LOI for each run.

(ii) Line speed (L_i), trimmed mat width (W_m), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.

(d) To comply with § 60.604(d), the owner or operator shall record measurements as required in § 60.604 (a) and (b) using the monitoring devices in § 60.603 (a) and (b) during the particulate matter runs.

Subpart QQQ — Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems
[Added by 53 FR 47623, November 23, 1988]

§ 60.690 Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(2) An individual drain system is a separate affected facility.

(3) An oil-water separator is a separate affected facility.

(4) An aggregate facility is a separate affected facility.

(b) Notwithstanding the provisions of 40 CFR 60.14(c)(2), the construction or installation of a new individual drain system shall constitute a modification to an affected facility described in § 60.690(a)(4). For purposes of this paragraph, a new individual drain system shall be limited to all process drains and the first common junction box.

§ 60.691 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in Subpart A of 40 CFR Part 60, and the following terms shall have the specific meanings given them.

"Active service" means that a drain is receiving refinery wastewater from a pro-

cess unit that will continuously maintain a water seal.

"Aggregate facility" means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

"Catch basin" means an open basin which serves as a single collection point for stormwater runoff received directly from refinery surfaces and for refinery wastewater from process drains.

"Closed vent system" means a system that is not open to the atmosphere and is composed of piping, connections, and if necessary, flow inducing devices that transport gas or vapor from an emission source to a control device.

"Completely closed drain system" means an individual drain system that is not open to the atmosphere and is equipped and operated with a closed vent system and control device complying with the requirements of § 60.692-5.

"Control device" means an enclosed combustion device, vapor recovery system or flare.

"Fixed roof" means a cover that is mounted to a tank or chamber in a stationary manner and which does not move with fluctuations in wastewater levels.

"Floating roof" means a pontoon-type or double-deck type cover that rests on the liquid surface.

"Gas-tight" means operated with no detectable emissions.

"Individual drain system" means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

"Junction box" means a manhole or access point to a wastewater sewer system line.

"No detectable emissions" means less than 500 ppm above background levels, as measured by a detection instrument in accordance with Method 21 in Appendix A of 40 CFR Part 60.

"Non-contact cooling water system" means a once-through drain, collection and treatment system designed and operated for collecting cooling water which does not come into contact with hydrocarbons or oily wastewater and which is not recirculated through a cooling tower.

"Oil-water separator" means wastewater treatment equipment used to separate oil from water consisting of

P 256 395 208

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NOT FOR INTERNATIONAL MAIL
(See Reverse)

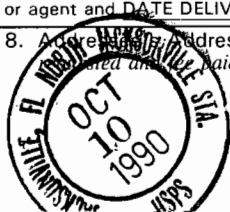
U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

Sent to	Alan Elwell
Street and No.	The Cellotex Corp.
P.O. State and ZIP Code	P.O. Box 28830 Jax, FL 32218
Postage	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	10-5-90 AC 16-186133

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

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

3. Article Addressed to: Alan H. Elwell, Plant Mgr. The Cellotex Corp. P.O. Box 28830 Jacksonville, FL 32218 Rebecca A. Graham	4. Article Number P 256 395 208
5. Signature - Addressee X	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 X	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery	8. Addressee's Address (ONLY if insured and 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

October 5, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alan H. Elwell, Plant Manager
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Re: Duval County - A.P.
The Cellotex Corporation
New By-Product Gypsum Process
AC 16-186133

Dear Mr. Elwell:

The Department has received a construction permit application for the above referenced project on September 6, 1990 and deemed it incomplete. Please provide the following information:

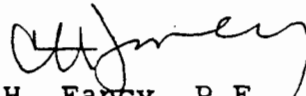
1. The control device, according to Item D, Section III of the application, is Ultra Industries, Inc.'s Baghouse, Model NW-510-120 (or equivalent). When do you expect to finalize the type and model of baghouse that will be installed? Please submit a manufacturer's brochure including the design specification sheet, along with a stack drawing showing sampling locations.
2. Submit a process flow diagram showing volumetric gas flow rates (CFM) for each pick-up point that will be exhausted through the baghouse.
3. Please submit an estimate (in #/hr), and a plan to control by-product gypsum and reclaimed gypsum board fugitive emissions generated during transportation or when stock piled for extended periods of time during dry season.
4. How many hours per year would you like to operate this source on No. 6 fuel oil? How much fuel oil is this entire facility permitted for (include the maximum sulfur content allowed)?
5. Please submit information on the number and type of burners that will be installed on the dryer.

Mr. Alan H. Elwell
Page 2

Processing of this application will continue as soon as the above referenced information has been received.

If you have any questions, please contact Mr. Mirza P. Baig at (904)488-1344.

Sincerely,



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

CHF/MB/plm

c: H. R. Sanders, P.E.
R. Roberson, BESD
A. Kutyna, NE Dist.

P 407 853 167

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NO INSURANCE COVERAGE PROVIDED
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(See Reverse)

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

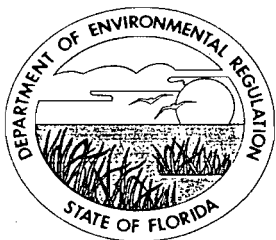
PS Form 3800, June 1985

Sent to Mr. Alan H. Elwell, Celotex	
Street and No. P. O. Box 28830	
P.O., State and ZIP Code Jacksonville, FL 32218	
Postage	\$
Certified Fee	
Special Delivery Fee	
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Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 2-26-91 Permit: AC 16-186133	

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

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

3. Article Addressed to: Mr. Alan H. Elwell Plant Manager The Colotex Corp. P. O. Box 28830 Jacksonville, FL 32218	4. Article Number P 407 853 167 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Addressee X <i>Bert Smith</i>	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>NA</i>	
7. Date of Delivery <i>2/28/91</i>	



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 25, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alan H. Elwell, Plant Manager
The Cellotex Corporation
P. O. Box 28830
Jacksonville, Florida 32218

Re: Duval County - A.P.
The Cellotex Corporation
New By-Product Gypsum Process
AC 16-186133

Dear Mr. Elwell:

The Department has received a revised construction permit application for the above referenced project on January 29, 1991 and deemed it incomplete. Please provide the following information:

1. According to the revised permit application Section V, total NOx emissions will be 19.8 tons per year, while in Section III, item C, actual NOx emissions are 48.4 tons per year. Please explain the discrepancy between these values. If in fact the NOx emissions are greater than 40 tons per year, this source will be subject to PSD requirements and you must resubmit a PSD permit application.
2. Since the actual SO₂ emissions (39.9 TPY) are so close to the significant emission rate (40 TPY), please submit calculations showing contemporaneous emissions changes for SO₂ within the past five years for this facility.

Processing of this application will continue as soon as the above referenced information has been received.

If you have any questions, please contact Mirza P. Baig at 904-488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief

Bureau of Air Regulation

CHF/MB/plm

c: H. R. Sanders, P.E.
R. Roberson, BESD
A. Kutyna, NED

BEST AVAILABLE COPY

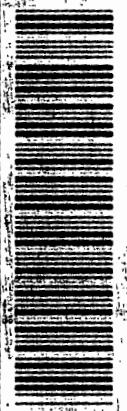
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FROM JIM WALTER 4010 BOY SCOUT BLVD TAMPA FL 33607 813/873-4351 H.R.Sanders/Environmental Affairs		ORIGIN TPA	AIRBILL NO. 558009093
TO Florida Dept. of Environmental Reg. Bureau of Air Quality Management 2600 Blair Stone Road Tallahassee FL 32301 Mr. Clair Faney, P.E.		AIRBORNE EXPRESS METHOD OF PAYMENT (ASSUMED SENDER UNLESS OTHERWISE NOTED) <input checked="" type="checkbox"/> BILL SENDER <input type="checkbox"/> BILL RECEIVER <input type="checkbox"/> 3rd PARTY AIRBORNE ACCOUNT NO. <input type="checkbox"/> PAID IN ADVANCE CHECK NO. / AMOUNT	
BILLING REFERENCE (WILL APPEAR ON INVOICE)		NO. OF PACKAGES WEIGHT (LBS.) CHECK IF SUBJECT TO CORRECTION <input type="checkbox"/> LETTER EXPRESS	
SPECIAL INSTRUCTIONS <input type="checkbox"/> SAT <input type="checkbox"/> HAA <input type="checkbox"/>		Subject to terms ON REVERSE SIDE OF SENDER'S COPY	

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Jim Walter corporation

ENVIRONMENTAL AFFAIRS DEPARTMENT

POST OFFICE BOX 31075 (33631-3075) • 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

January 28, 1991

Overnight Mail

Mr. Mirza P. Baig
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Revisions to Referenced Application

Re: Duval County - A.P.
The Celotex Corporation
New By-Product Gypsum Process
AC 16-186133

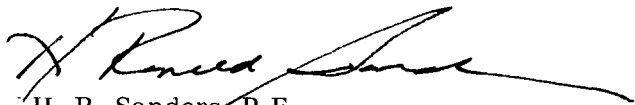
Dear Mr. Baig:

Enclosed are two revised copies of the referenced application. The revisions were necessitated due to a change in the primary process equipment manufacturer. The primary changes affecting the application information are the recycling of a portion of the drying air and a different baghouse manufacturer. All other parameters and system functions remain essentially unchanged. Attached is an "Index of Revisions" to assist you in following the revisions from the original submittal.

Comments contained in Mr. Fancy's letter of October 5, 1990 have also been addressed by providing the requested information at appropriate places in the application.

Please contact me at 813/873-4351 if you have questions or require additional information. As indicated to you by telephone, I will be happy to come to Tallahassee if it would be of benefit in going forward with the permit process.



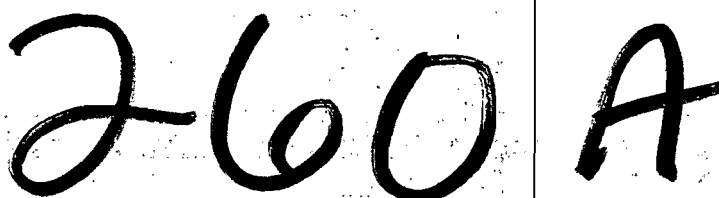
Sincerely,



H. R. Sanders, P.E.
Senior Environmental Engineer

cc: A. Elwell, Celotex-Jacksonville (w/attach.)
F. Gallant, J.W. Research (w/attach.)

Enc. *M. Baig*
A. Kulyma, NE Dist
R. Robinson, BESD

FORM OF PAYMENT				SERVICES																															
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INDEX OF REVISIONS

I. Application

- a. Pg. 2 of 12; Sect. II.B. - Revised dates
- b. Pg. 4 of 12; Sect. III.C. - Revised PM numbers
- c. Pg. 5 of 12; Sect. III.D. - New baghouse data
- d. Pg. 6 of 12; Sect. III.H. - New stack data
- e. Pg. 7 of 12; Sect. V. 6. & 8. - Added figures

II. Section V. Supplement

- a. Pg. 1; Item 1.c. - Added equivalent gallons/hr
- b. Pg. 2; Item 2.a. - Recalculated PM emissions
- c. Pg. 5; Item 3.a. - Recalculated PM potential emissions
- d. Pg. 5; Item 4 - New baghouse data
- e. Pg. 6; Item 5 - Recalculated required efficiency

III. Attachments

- a. Attachment A - Rewritten to give more detailed description
- b. Attachment C - Added baghouse bulletin
- c. Table I - Revised PM & PM₁₀ numbers to match recalculation
- d. Table II - Revised PM & PM₁₀ numbers to match recalculation

IV. Figures

- a. Figure 1 - Added covered storage building and enlarged drawing
- b. Figure 2 - New drawing
- c. Figure 3 - Revised to reflect change in equipment manufacturer

IV. Figures (cont'd)

- d. Figure 4 - New drawing
- e. Figure 5 - New drawing
- f. Figure 6 - New drawing
- g. Figure 7 - New drawing

V. NSPS

No changes.

THE CELOTEX CORPORATION

JACKSONVILLE, FLORIDA

APPLICATION TO CONSTRUCT AIR
POLLUTION SOURCES
(REVISED)

By-Product Gypsum Handling
and Drying System

September 1990
(Revised January 1991)

Prepared by:

H. R. Sanders
Jim Walter Corporation
Tampa, Florida

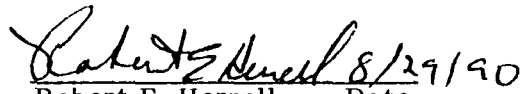
Authorization

Jim Walter corporation

POST OFFICE BOX 31075 (33631-3075) · 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

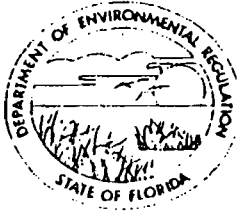
August 29, 1990

Notice is hereby given that Alan H. Elwell, Plant Manager, The Celotex Corporation, Dames Point Road, Jacksonville, Duval County, Florida is the authorized representative for The Celotex Corporation at the Jacksonville facility and has full signatory authority for environmental matters.


Robert E. Herrell Date
Vice President-Manufacturing
Building Products Division

Application

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER
GARY L. SHAFFER
ASSISTANT DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Process [X] New¹ [] Existing¹
APPLICATION TYPE: [X] Construction [] Operation [] Modification
COMPANY NAME: The Celotex Corporation COUNTY: Duval
Identify the specific emission point source(s) addressed in this application (i.e. Lime
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) By-Product Gypsum Process-
ing
SOURCE LOCATION: Street Dames Point Road City Jacksonville
UTM: East 7446.430 North 3362.370
Latitude 30° 23' 37"N Longitude 81° 33' 30"W
APPLICANT NAME AND TITLE: Alan H. Elwell, Plant Manager
APPLICANT ADDRESS: P.O. Box 28830; Jacksonville, FL 32218

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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: Alan H. Elwell

Alan H. Elwell - Plant Manager
Name and Title (Please Type)

Date: 8/31/90 Telephone No. 904/751-4400

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

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

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

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

Signed H. R. Sanders

H. R. Sanders

Name (Please Type)

Jim Walter Corporation

Company Name (Please Type)

4010 Boy Scout Blvd.; Tampa, FL 33607-5750

Mailing Address (Please Type)

Florida Registration No. PE0035237 Date: 8/28/90 Telephone No. 813/873-4351

SECTION II: GENERAL PROJECT INFORMATION

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

See Attachment A

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

Start of Construction 4-29-91 Completion of Construction 12-13-91

- 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.)

Baghouse and associated equipment - \$200,000

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

N/A

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

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

1. Is this source in a non-attainment area for a particular pollutant? No
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No
4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? Yes
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? Yes
- a. If yes, for what pollutants? Particulates
 - 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.

See Attachment B.

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		
By-Product Gypsum	None	-	65,800 (wet)	A
Reclaimed Gypsum	None	-	14,200 (wet)	B
*Natural Gas	None	-	28,990 Ft ³ /hr	G
*No. 6 Fuel Oil	Sulfur	1.45	1602	G
*Propane	None	-	11,970 Ft ³ /hr	G

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

- Total Process Input Rate (lbs/hr): 81,602 (wet)
- Product Weight (lbs/hr): 66,000 (dry)

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

Note: 40 CFR Part 60 Subpart 000. PM allowable is 0.022 grains/dscf.

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
PM	3.17	13.9	40CFR Part 60 Subpart 000	3.46	3303.5	14,469	F
SO _x	46.3	39.9	N/A	N/A	46.3	39.9	F
No _x	11.0	48.4	N/A	N/A	11.0	48.4	F
CO	1.0	4.4	N/A	N/A	1.0	4.4	F
VOC	0.23	1.0	N/A	N/A	0.23	1.0	F

¹See Section V, Item 2.

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

³Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
MAC Equipment, Inc.	PM	99.9	N/A	Mfg. guarantee
Baghouse Model				
120 RPT 476				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.019	0.029	30.0
No. 6 Fuel Oil	133.8	200.7	30.0
Propane	0.008	0.012	30.0

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

Fuel Analysis: See Attachment D.

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

All material is recovered as product or reprocessed in a closed
cycle system.

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

Stack Height: 73 ft. Stack Diameter: 3.0 ft.
 Gas Flow Rate: 28,500 ACFM 18,500 DSCFM Gas Exit Temperature: 160 °F.
 Water Vapor Content: 15.6 (by weight) % Velocity: 67.2 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack 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: _____

N/A

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

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

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. Figures 3-7.
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. Figures 1 & 2.

- 9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)
 Yes No

Contaminant	Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height:

ft.

b. Diameter:

ft.

c. Flow Rate:

ACFM

d. Temperature:

°F.

e. Velocity:

FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(a) why.

SECTION VII - PREVENTION OF SIGNIFICANT DEYERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? Yes No
- b. Was instrumentation calibrated in accordance with Department procedures?
 Yes No Unknown

B. Meteorological Data Used for Air Quality Modeling

- 1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year
- 2. Surface data obtained from (location) _____
- 3. Upper air (mixing height) data obtained from (location) _____
- 4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

- 1. _____ Modified? If yes, attach description.
- 2. _____ Modified? If yes, attach description.
- 3. _____ Modified? If yes, attach description.
- 4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Sect. V - Supplement

THE CELOTEX CORPORATION
JACKSONVILLE, FLORIDA

Application to Construct a By Product
Gypsum Handling and Drying System

SECTION V: SUPPLEMENTAL REQUIREMENTS

1. RAW MATERIALS

- a. By-Product Gypsum - 28 dry tons/hour (Design) @ 15% Moisture

$$\frac{28}{.85} = \frac{32.9 \text{ wet tons}}{\text{hour}}$$
$$= \frac{65,800 \text{ wet lb}}{\text{hour}}$$

- b. Reclaim Gypsum - 5 dry tons/hour (Design) @ 30% Moisture

$$\frac{5}{0.7} = \frac{7.1 \text{ wet tons}}{\text{hour}}$$
$$= \frac{14,200 \text{ wet lb}}{\text{hour}}$$

- c. Fuel Oil (No. 6)

$$\frac{30.0 \times 10^6 \text{ Btuh}}{1.49506 \times 10^5 \text{ Btu/gal}} \times 7.984 \frac{\text{lb}}{\text{gal}} = \frac{1602 \text{ lb}}{\text{hour}}$$

(200.7 gal/hr)

- d. Natural Gas

$$\frac{30.0 \times 10^6 \text{ Btuh}}{1.035 \times 10^3 \text{ Btu/ft}^3} = 28.99 \times 10^3 \text{ ft}^3/\text{hour}$$
$$= \frac{28,990 \text{ ft}^3}{\text{hr}}$$

- e. Propane

$$\frac{30.0 \times 10^6 \text{ Btuh}}{2.507 \times 10^3 \text{ Btu/ft}^3} = 11.97 \times 10^3 \text{ ft}^3/\text{hour}$$
$$= \frac{11,970 \text{ ft}^3}{\text{hour}}$$

Total Process Input (Maximum)

By-Product Gypsum	=	65,800 lb/hr
Reclaim Gypsum	=	14,200 lb/hr
Fuel Oil	=	<u>1,602 lb/hr</u>
Total	=	<u>81,602 lb/hr</u>

Product

Equal Dry Weight of Gypsum = 33 tons/hour
= 66,000 lb/hour

2. BASIS OF EMISSION ESTIMATES

a. Particulate Matter (Baghouse Stack)

Maximum Emission Rate = 0.02 gr/dscf

Qs = 18,500 dscfm

$$\frac{0.02 \text{ gr/dscf} \times 18,500 \text{ dscfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = \underline{3.17 \text{ lb/hr}}$$

$$3.17 \text{ lb/hr} \times \frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{13.9 \text{ tons/yr}}$$

Due to the high moisture content of the gypsum prior to the dryer, no emissions are expected from the handling operations.

b. Sulfur Dioxide

(1) No SO₂ from BPG & Reclaim

(2) Fuel Oil S = 1.45%, by weight

AP-42 Factor = 157 S lb, SO₂ 10³ gal

F.A.C. Title 17, Chap. 17-2, Table 500-2
Significant Emission Rate, SO₂ = 40 TPY

Limit SO₂ Emission = 39.9 TPY

$$\frac{39.9 \text{ tons/yr} \times 2000 \text{ lb/ton}}{157 (1.45) \text{ lb}/10^3 \text{ gal}} = 350.538 \text{ } 10^3 \text{ gal/yr}$$

$$= \underline{350,538 \text{ gal oil/yr}}$$

(3) N.G.

AP-42 Factor = 0.6 lb/10⁶ ft³

$$0.6 \text{ lb}/10^6 \text{ ft}^3 \times 0.029 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.017 \text{ lb/hr}}$$

$$\frac{350,538 \text{ gal/yr}}{200.7 \text{ gal/hr}} = 1746.6 \text{ hr/yr Fuel Oil}$$

$$.017 \text{ lb/hr} \times \frac{(8760-1746.6) \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{0.06 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 0.6 \text{ lb}/10^6\text{ft}^3$$

$$0.6 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ ft}^3/\text{hr} = \underline{0.007 \text{ lb/hr}}$$

- (5) Only one fuel is used at any one time. Maximum fuel oil useage will be limited to 350,538 gal/hr. The remaining energy requirement will be made up with natural gas.
Total SO₂ = 39.96 TPY.

c. Nitrogen Oxides

- (1) No NO_x from BPG or Reclaim

(2) Fuel Oil

$$\text{AP-42 Factor} = 55 \text{ lb}/10^3\text{gal}$$

$$55 \text{ lb}/10^3\text{gal} \times 0.2007 \frac{10^3\text{gal}}{\text{hr}} = \underline{11.04 \text{ lb/hr}}$$

$$\frac{55 \text{ lb}/10^3\text{gal} \times 350.5 \text{ } 10^3\text{gal/yr}}{2000 \text{ lb/ton}} = \underline{9.6 \text{ TPY}}$$

(3) N.G.

$$\text{AP-42 Factor} = 100 \text{ lb}/10^6\text{ft}^3$$

$$100 \text{ lb}/10^6\text{ft}^3 \times 0.029 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{2.9 \text{ lb/hr}}$$

$$\frac{2.9 \text{ lb/hr} \times 7013.4 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{10.2 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 100 \text{ lb}/10^6\text{ft}^3$$

$$100 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{1.2 \text{ lb/hr}}$$

- (5) Only one fuel is fired at any one time. Maximum fuel oil useage will be limited to 350,538 gal/yr. The remainder will be made up with natural gas. Total NO_x = 19.8 TPY.

d. Carbon Monoxide

- (1) BPG & Reclaim do not release CO.

d. Carbon Monoxide (cont'd)

(2) Fuel Oil

$$\text{AP-42 Factor} = 5 \text{ lb}/10^3 \text{ gal}$$

$$5 \text{ lb}/10^3 \text{ gal} \times .2007 \text{ } 10^3 \text{ gal/hr} = \underline{1.0 \text{ lb/hr}}$$

$$\frac{5 \text{ lb}/10^3 \text{ gal} \times 350.5 \text{ } 10^3 \text{ gal/yr}}{2000 \text{ lb/ton}} = \underline{0.9 \text{ TPY}}$$

(3) N.G.

$$\text{AP-42 Factor} = 20 \text{ lb}/10^6 \text{ ft}^3$$

$$20 \text{ lb}/10^6 \text{ ft}^3 \times 0.029 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.58 \text{ lb/hr}}$$

$$\frac{0.58 \text{ lb/hr} \times 7013.4 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{2.0 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 20 \text{ lb}/10^6 \text{ ft}^3$$

$$20 \text{ lb}/10^6 \text{ ft}^3 \times 0.012 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.24 \text{ lb/hr}}$$

- (5) Only one fuel is used at any one time. Maximum fuel oil usage will be limited to 350,538 gal/yr. The remainder will be made up with natural gas. Total CO = 2.9 TPY.

e. Volatile Organic Compounds

- (1) BPG & Reclaim do not release VOC.

(2) Fuel Oil

$$\text{AP-42 Factor} = 1.13 \text{ lb}/10^3 \text{ gal}$$

$$1.13 \text{ lb}/10^3 \text{ gal} \times 0.2007 \text{ } 10^3 \text{ gal/hr} = \underline{0.23 \text{ lb/hr}}$$

$$\frac{1.13 \text{ lb}/10^3 \text{ gal} \times 350.5 \text{ } 10^3 \text{ gal yr}}{2000 \text{ lb/ton}} = \underline{0.2 \text{ TPY}}$$

(3) N.G.

$$\text{AP-42 Factor} = 5.3 \text{ lb}/10^6 \text{ ft}^3$$

$$5.3 \text{ lb}/10^6 \text{ ft}^3 \times 0.029 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.15 \text{ lb/hr}}$$

$$\frac{0.15 \text{ lb/hr} \times 7013.4 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{0.5 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 5.3 \text{ lb}/10^6 \text{ ft}^3$$

$$5.3 \text{ lb}/10^6 \text{ ft}^3 \times 0.012 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.06 \text{ lb/hr}}$$

(5) Only one fuel will be used at any one time. Maximum fuel oil useage will be limited to 350,528 gal/yr. The remainder will be made up with natural gas. Total VOC = 0.7 TPY.

3. BASIS FOR POTENTIAL EMISSIONS

a. Particulate Matter

Sources of particulate matter emissions are BPG, Reclaim and Fuel Oil. Particulate matter after passing through the dryer enters a cyclone which recovers the dried gypsum from the conveying air stream. It is estimated that the cyclone will recover 95% of the dried gypsum. Particulate from combustion of fuel oil is assumed to pass through to the baghouse.

PM From Fuel Oil (S = 1.45%)

$$\text{AP-42 Factor} = [10S + 3] \text{ lb}/10^3 \text{ gal}$$

$$[10(1.45)+3] \text{ lb}/10^3 \text{ gal} \times 0.2007 \text{ } 10^3 \text{ gal} = \underline{3.51 \text{ lb/hr}}$$

$$\text{Dry Gypsum} = 33 \text{ tons/hr} = 66,000 \text{ lb/hr}$$

$$66,000 \text{ lb/hr} \times 0.05 = \underline{3300 \text{ lb/hr}}$$

$$\underline{\text{PM Potential Uncontrolled Emissions}} = 3300 + 3.51 = \underline{3303.51 \text{ lb/hr}}$$

$$3303.51 \text{ lb/hr} \times \frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{14469 \text{ tons/yr}}$$

b. SO_x, NO_x, CO, VOC

No controls are planned. Potential uncontrolled emissions are the same as emissions.

4. CONTROL SYSTEM DETAILS

a. Baghouse

b. MAC Equipment, Inc.

Model 120RPT476

- c. Bags: 476, 12 oz/sq.yd. dacron polyester needled felt, 6" nominal diameter X 10 ft. long, 7901 ft² total.
- d. Cleaning Mechanism: Reverse jet
- e. A/C Ratio: 3.61/1
- f. See attached MAC Equipment bulletin for additional details.

5. CONTROL SYSTEM EFFICIENCY

From 3. above

Uncontrolled Particulate Emission Rate = 3303.51 lb/hr

From 2. above

Particulate emissions = 3.17 lb/hr (based on mfg. guarantee of 0.02 grains/dscf)

Required Efficiency

$$\frac{[3303.51 \text{ lb/hr} - 3.17 \text{ lb/hr}]}{3303.51} \times 100\% = \underline{\underline{99.9\%}}$$

Attachments

It is proposed to construct a system to receive and store, transfer, grind and dry a blend of by-product gypsum (BPG) and reclaimed gypsum board (in-plant recycle only).

BPG will be received by truck from Jacksonville Electric Authority and stockpiled on-site in a covered storage area (see Figure 2). BPG will be delivered only during daytime hours, five days per week. Only that quantity of BPG necessary to operate through a weekend will be accumulated. It may be necessary occasionally to hold material for a short time (hours) on a concrete pad outside the covered storage. All material is received in a moist condition. Material temporarily stored outside will be moved into covered storage before it becomes dry enough to permit fugitive emission losses. BPG from the storage area will be introduced into the system via a hopper and belt conveyor (see Figure 3).

Unsaleable gypsum board from plant manufacturing operation is presently stockpiled on-site for recycling. The existing recycle handling system will be incorporated into the proposed system (see Figure 3). The reclaim gypsum will be added to the system on the belt conveyor from the BPG hopper. The combined reclaim gypsum and BPG (mixture) will be conveyed to a surge hopper for metering into the dryer system.

From the surge hopper, the mixture is fed into the Impact Mill (see Figure 4). In the Impact Mill the mixture is crushed and drying begins. Hot air is added at the Impact Mill to dry the mixture and to convey the ground material through the system. From this point to the Bucket Elevator the system is totally enclosed. Crushed mixture leaving the Impact Mill passes through a Classifier which separates oversize material and returns it to the Impact Mill.

Hot air is generated in the Air Heater. The Air Heater is equipped with a single burner capable of burning No. 6 fuel oil, natural gas or propane (see Figure 5). The burner will have a rated output of 30×10^6 Btuh. The air from the air heater will be mixed with recycled air from the system prior to entering the Impact Mill.

The existing permitted fuel oil use at the Jacksonville plant is based on the design maximum heat input of the use sources. The total heat input from fuel oil combustion presently permitted is 158×10^6 Btuh. Fuel oil sulfur content is to be a maximum of 1.5%.

The proposed drying operation has a maximum firing rate of 30×10^6 Btuh and a proposed normal rate of 20×10^6 Btuh. Fuel sulfur will be a maximum 1.45%. In order to not exceed the significant emission rate of 40 TPY for the proposed facility, use of fuel oil by the proposed facility will be limited to that amount resulting in a sulfur dioxide release not in excess of 39.9 TPY. This results in a total use by the proposed dryer of up to 350,538 gallons/year. Hours of operation on oil will vary depending on the firing rate and price of oil versus natural gas or propane. At the nominal rate of 20×10^6 Btuh and heating value of 149,500 Btu/gallon, the total hours per year would be 2621 hours/year.

From the Classifier the mixture is air conveyed to a Cyclone which separates most of the mixture from the conveying air. The removed mixture is passed out of the cyclone through an airlock into a closed screw conveyor. Exhaust air from the Cyclone returns to the System Fan.

From the System Fan a portion of the air is returned to the Impact Mill as a heat recovery measure. The remaining air enters the Baghouse. An emergency air relief valve is supplied in case of over-temperature conditions. In the Baghouse the remaining fines in the conveying air are removed. The removed mixture is discharged to the same enclosed Screw Conveyor serving the Cyclone. The exhaust air from the baghouse discharges through the Exhaust Fan into the Stack. The Stack is provided with a testing platform and sampling ports (see Figure 6).

From the Screw Conveyor the mixture enters a Bucket Elevator (see Figure 7). The Bucket Elevator transfers the mixture to the existing board production system. Potential dust from the Bucket Elevator will be controlled by exhausting air from the Bucket Elevator housing. The exhaust will be combined with the system conveying air at the entrance to the Baghouse.

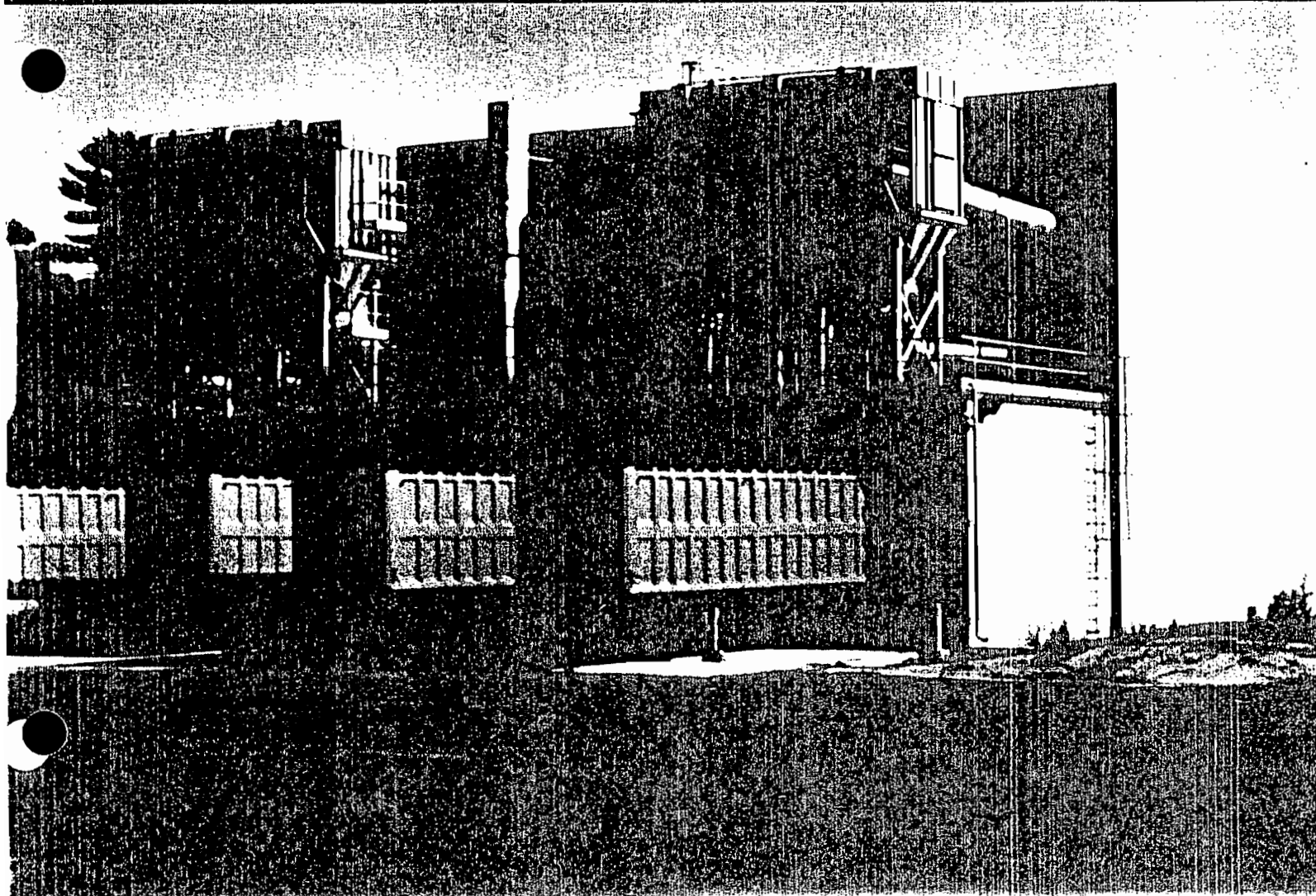
Justification for Non-NSR Status

The attached New Source Review (NSR) checklist (Table I) summarizes the results of determinations of applicability of pertinent questions establishing NSR requirements. Based on the checklist, the proposed facility modification is not subject to NSR.

Emissions for the existing facility and the proposed modification are summarized on attached Table II. Calculations of the existing facility emissions are also included. Emissions calculations for the proposed modifications are given in Section V.



RPT PULSE JET FILTERS



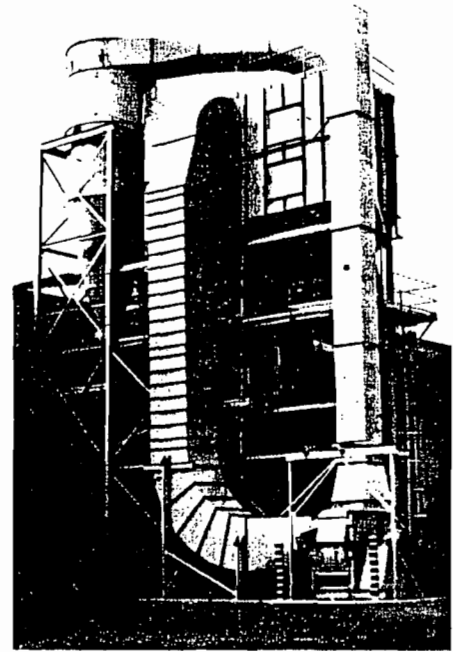
MAC RPT Pulse Jet Filter

The MAC RPT is a state of the art pulse jet filter which incorporates the latest bag cleaning technology in a filter design- ed to be simple and readily maintainable. The RPT design includes a walk-in plenum, top bag (clean air side) removal and live bottom trough hoppers as standard equipment. To reduce your field installation costs, the MAC RPT is supplied with the header pipe, diaphragm valves and timer factory installed. Each row of bags is cleaned by a 1½" diaphragm air valve which is piped in the factory to a pilot solenoid valve. The solenoid is factory wired to an adjustable solid state timer.

RPT units are available in sizes ranging from 2789 sq. ft. of cloth to 8400 sq. ft. of cloth. Bag lengths are 10 ft. or 12 ft. The units may be manifolded to provide larger capacities. In multiple module installations, valving is available to provide for off-line cleaning or for maintenance isolation.

The RPT filter is furnished in welded sections with reinforced 12 ga. steel as standard construction suitable for 20" W.G. The tube sheet is of all welded 7 ga. construction. Filter housing and hopper thickness up to ¼" are available as required for certain applications.

Bag cleaning is accomplished by use of 100 PSIG compressed air. Bag tops are protected from the air blast by use of the upper section of a venturi shape. Bag cages are of rigid wire construction. Standard bag fabrics are available for operation up to 550 degrees F.



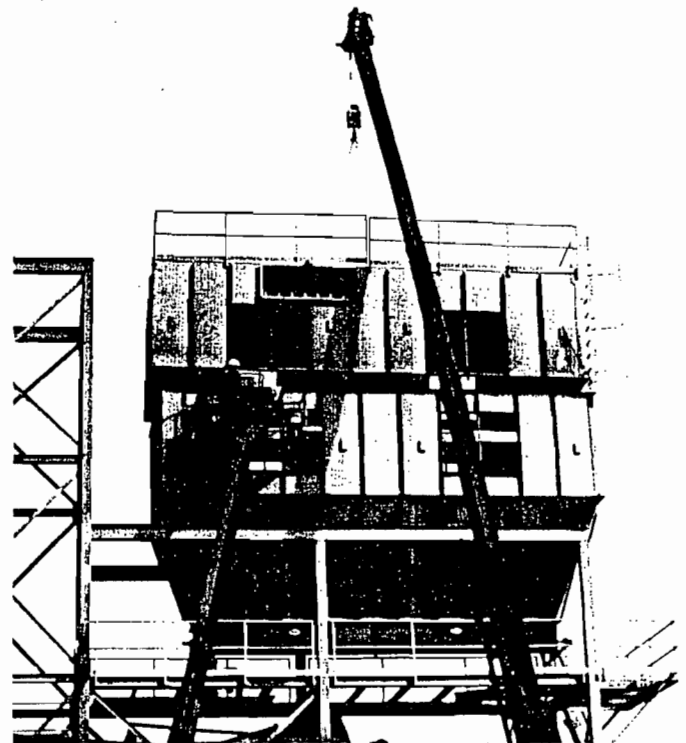
Hopper, Housing, and Plenum



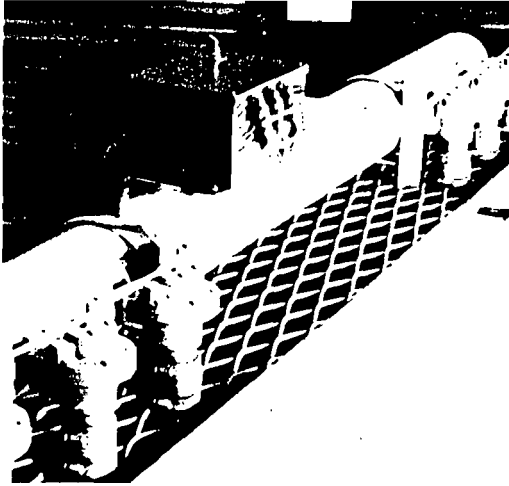
Hopper is placed on support steel.



Housing is set in place on hopper.



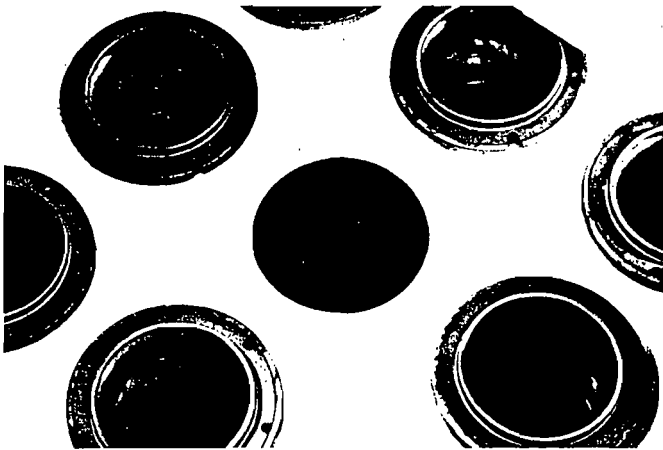
Plenum is installed.



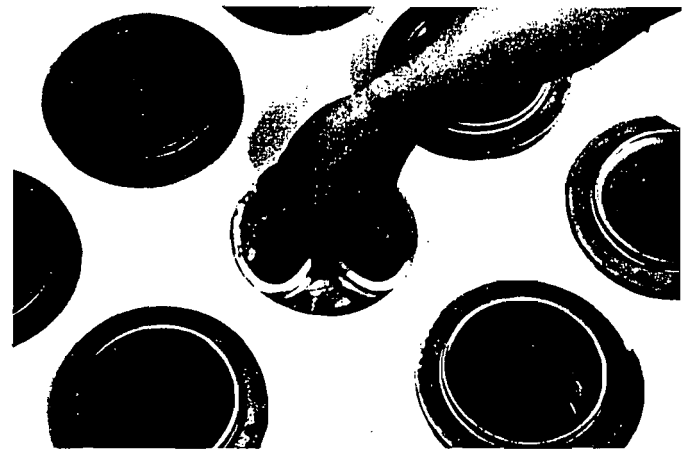
Features

- Factory prewired solenoid valves and timer.
- Shop installed piping for solenoids and diaphragm valves.
- External access to timer, solenoids and diaphragm valves.
- 1½" diaphragm valves for maximum cleaning energy.
- All welded plenum, housing and hopper.
- Walk-in clean air plenum and top bag removal.
- Rigid wire bag cages.
- Bolted manhole in hopper.
- Flanged inlet and outlet.
- Pressure differential gauge mounted on housing.
- Air pressure gauge mounted on air manifold.
- Hopper inlet diffuser baffle.
- 9" flared trough screw conveyor in trough hoppers.

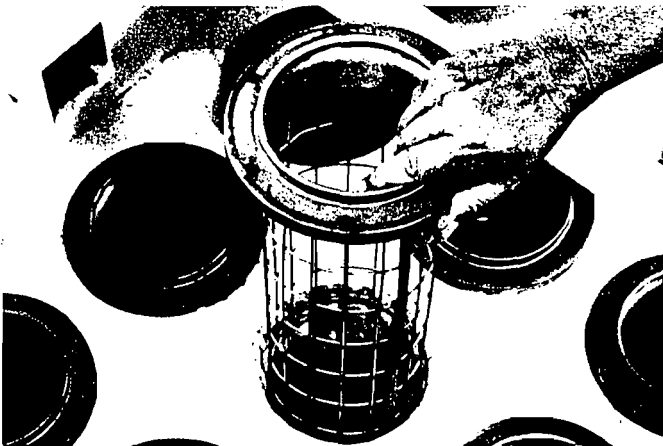
Top Bag Removal



Step 1—Entry into the dirty side of the filter is unnecessary.



Step 2—Snap band with high profile lip seals secure the bag to the tube sheet.



Step 3—The cage snaps into place by merely lowering it into the bag and pushing down.

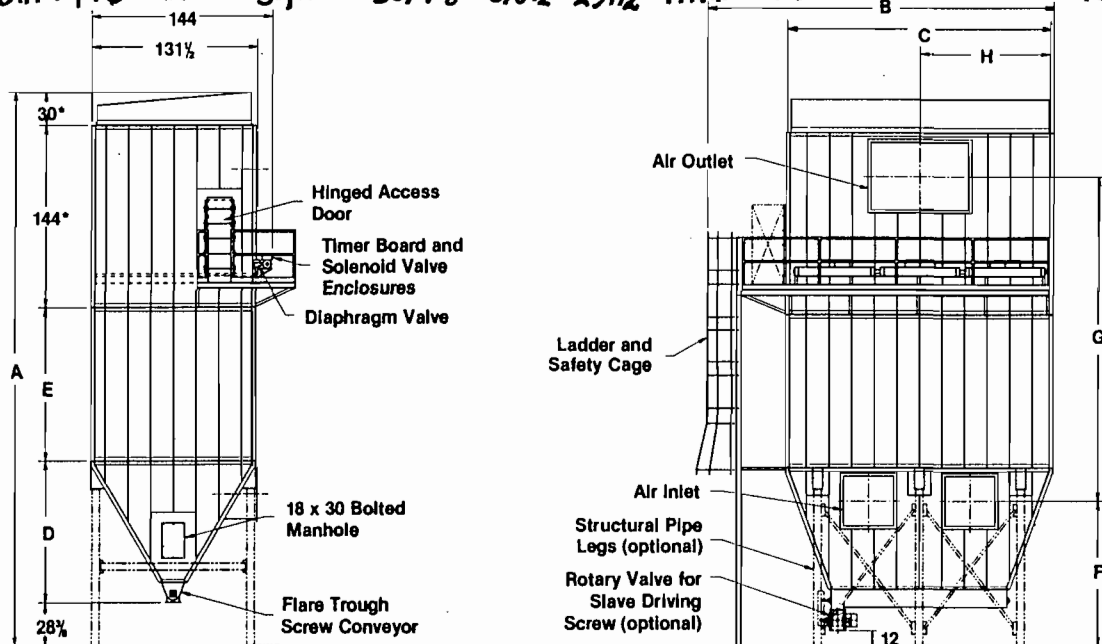


Step 4—The header pipes can only fit one way, thus insuring alignment of the blow nozzles.

Specifications

Filter Model	Sq. Ft. Cloth	Approx. Weight	A	B	C	D	E	F	G	H
120RPT168	2789	14245	372 $\frac{7}{8}$	183 $\frac{1}{2}$	104 $\frac{1}{2}$	96 $\frac{1}{2}$	104	97 $\frac{7}{8}$	239	52 $\frac{1}{4}$
144RPT168	3360	15730	420 $\frac{7}{8}$	183 $\frac{1}{2}$	104 $\frac{1}{2}$	96 $\frac{1}{2}$	104	97 $\frac{7}{8}$	268	52 $\frac{1}{4}$
120RPT196	3254	15930	387 $\frac{5}{8}$	200 $\frac{1}{2}$	121 $\frac{1}{2}$	111 $\frac{1}{4}$	104	111 $\frac{1}{8}$	237 $\frac{1}{2}$	60 $\frac{3}{4}$
144RPT196	3920	17530	435 $\frac{5}{8}$	200 $\frac{1}{2}$	121 $\frac{1}{2}$	111 $\frac{1}{4}$	122	111 $\frac{1}{8}$	266 $\frac{1}{2}$	60 $\frac{3}{4}$
120RPT224	3719	17400	389 $\frac{9}{8}$	217 $\frac{1}{2}$	138 $\frac{1}{2}$	113 $\frac{3}{8}$	104	112 $\frac{3}{4}$	236 $\frac{1}{2}$	69 $\frac{1}{4}$
144RPT224	4480	19110	437 $\frac{7}{8}$	217 $\frac{1}{2}$	138 $\frac{1}{2}$	113 $\frac{3}{8}$	122	112 $\frac{3}{4}$	265 $\frac{1}{2}$	69 $\frac{1}{4}$
120RPT252	4183	18890	389 $\frac{9}{8}$	234 $\frac{1}{2}$	155 $\frac{1}{2}$	113 $\frac{3}{8}$	104	111 $\frac{1}{4}$	237 $\frac{1}{2}$	77 $\frac{3}{4}$
144RPT252	5040	20710	437 $\frac{7}{8}$	234 $\frac{1}{2}$	155 $\frac{1}{2}$	113 $\frac{3}{8}$	122	111 $\frac{1}{4}$	266 $\frac{1}{2}$	77 $\frac{3}{4}$
120RPT280	4648	20630	389 $\frac{9}{8}$	251 $\frac{1}{2}$	172 $\frac{1}{2}$	113 $\frac{3}{8}$	104	116 $\frac{1}{4}$	230	86 $\frac{1}{4}$
144RPT280	5600	22550	437 $\frac{7}{8}$	251 $\frac{1}{2}$	172 $\frac{1}{2}$	113 $\frac{3}{8}$	122	116 $\frac{1}{4}$	259	86 $\frac{1}{4}$
120RPT308	5113	22090	389 $\frac{9}{8}$	268 $\frac{1}{2}$	189 $\frac{1}{2}$	113 $\frac{3}{8}$	104	115 $\frac{1}{4}$	231	94 $\frac{3}{4}$
144RPT308	6160	24130	437 $\frac{7}{8}$	268 $\frac{1}{2}$	189 $\frac{1}{2}$	113 $\frac{3}{8}$	122	115 $\frac{1}{4}$	260	94 $\frac{3}{4}$
120RPT336	5578	23580	389 $\frac{9}{8}$	285 $\frac{1}{2}$	206 $\frac{1}{2}$	113 $\frac{3}{8}$	104	114 $\frac{1}{4}$	229 $\frac{1}{2}$	103 $\frac{1}{4}$
144RPT336	6720	25730	437 $\frac{7}{8}$	285 $\frac{1}{2}$	206 $\frac{1}{2}$	113 $\frac{3}{8}$	122	114 $\frac{1}{4}$	258 $\frac{1}{2}$	103 $\frac{1}{4}$
120RPT364	6042	25100	389 $\frac{9}{8}$	302 $\frac{1}{2}$	223 $\frac{1}{2}$	113 $\frac{3}{8}$	104	113 $\frac{3}{8}$	230	111 $\frac{3}{4}$
144RPT364	7280	27310	437 $\frac{7}{8}$	302 $\frac{1}{2}$	223 $\frac{1}{2}$	113 $\frac{3}{8}$	122	113 $\frac{3}{8}$	259	111 $\frac{3}{4}$
120RPT392	6507	26540	389 $\frac{9}{8}$	319 $\frac{1}{2}$	240 $\frac{1}{2}$	113 $\frac{3}{8}$	104	112 $\frac{1}{4}$	230	120 $\frac{1}{4}$
144RPT392	7840	28910	437 $\frac{7}{8}$	319 $\frac{1}{2}$	240 $\frac{1}{2}$	113 $\frac{3}{8}$	122	112 $\frac{1}{4}$	259	120 $\frac{1}{4}$
120RPT420	6972	28060	389 $\frac{9}{8}$	336 $\frac{1}{2}$	257 $\frac{1}{2}$	113 $\frac{3}{8}$	104	111 $\frac{1}{4}$	231	128 $\frac{3}{4}$
144RPT420	8400	30510	437 $\frac{7}{8}$	336 $\frac{1}{2}$	257 $\frac{1}{2}$	113 $\frac{3}{8}$	122	111 $\frac{1}{4}$	260	128 $\frac{3}{4}$

120RPT476 7901 31,100 387 $\frac{7}{8}$ 370 $\frac{1}{2}$ 291 $\frac{1}{2}$ 111 $\frac{1}{4}$ 104 " 233 145 $\frac{3}{4}$



*The filters with 120" bags and cages do not have a bolted sloped roof section. The sloped roof is an integral part of the walk-in plenum. The overall height of the walk-in plenum becomes 144", and the 30" dimension does not apply.



Applications

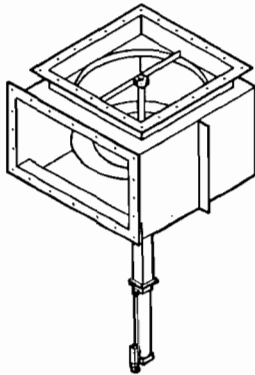
The MAC RPT has been utilized to control particulate emissions in a variety of industrial applications including foundry sand, grain dust, sander dust, rice, sugar, phosphorous, asbestos, barium metaborate, alumina, salt, gypsum, limestone, refuse derived fuels, soda ash, trisodium phosphate, coal, and many others.

Options

The following standard options are available on RPT filters:

- Outlet weatherhood
- Epoxy coating
- Level indicators
- Temperature controller
- Explosion vents
- Structural steel supports
- NEMA 4 & 9 enclosures
- Sprinkler taps
- Extended auger
- 304 S.S. construction

For other options consult factory.



Poppet Valve

The MAC Poppet Valve is designed to be used for module isolation in multiple module air pollution control systems for either "off-line" cleaning or maintenance. This valve will provide tight shut-off over a temperature range from 0 degrees F. to 550 degrees F.

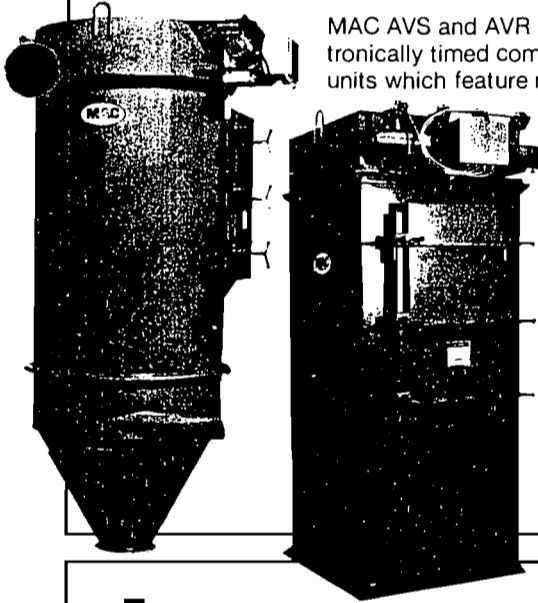
Uniform Bag Cleaning

In order to provide optimum pressure drop and bag life bag cleaning must be both instantaneous and uniform. The oscilloscope traces show the sharp pressure wave and its uniformity over the length of the filter bags in the RPT filter.



AVS and AVR Filters

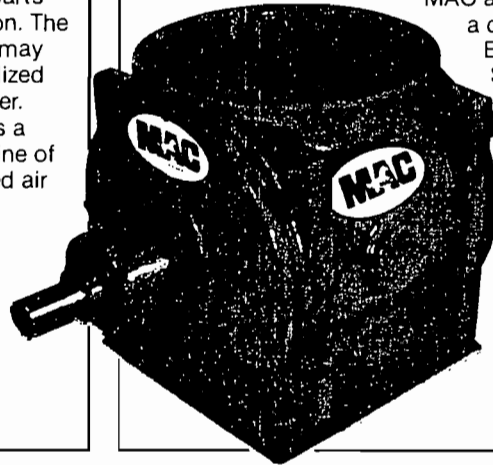
MAC AVS and AVR filters are electronically timed compressed air units which feature no moving parts construction. The MAC AVR may also be utilized as a receiver. MAC offers a complete line of compressed air units.



Airlocks

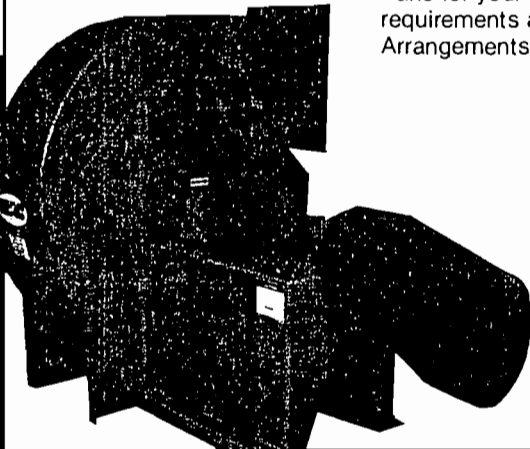
Pictured is the MAC Heavy Duty Airlock. Our line of Heavy Duty Airlocks are used in a variety of industries.

MAC also manufactures a complete line of High Efficiency Airlocks, No Shear Airlocks, and Light Duty Airlocks for your pneumatic conveying needs plus a complete line of airlock accessories.

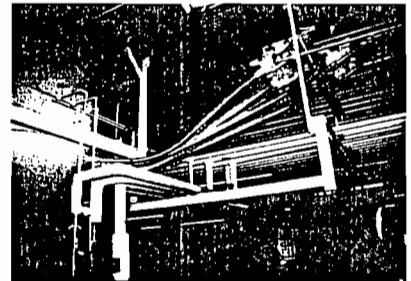


Fans

MAC has a complete line of Backward Inclined, High Static, Straight Bladed, and Material Handling Fans for your air handling requirements available in Arrangements 1, 4, and 9.



Pneumatic Conveying Systems



MAC Offers a complete line of valves, airlocks, blowers, filters, receivers and electrical control panels for your pneumatic conveying needs. MAC also offers a rail unload system and vacuum sequencing system to meet your applications. The picture above features line diverters conveying to two distinct locations, one being the pneumatic receiver to the left.

Contact MAC for your complete line of dilute and dense phase pneumatic conveying systems and components. Ask about our solution engineering services available. We also offer MAC Service Center for quick service on new equipment or replacement parts for your pneumatic conveying system.

MWP Dust Filter

The MAC Model MWP is a high-velocity, reverse-air dust filter designed to handle larger dust problems. It may be applied to a variety of operations, including hay, grain, flour, feed, and many other materials. The Model MWP requires no compressed air supply and may be used as either a dust filter or a pneumatic receiver.



MAC Equipment, Inc.

P.O. Box 205
Sabetha, Kansas 66534
Call Toll Free 1-800-223-2191
or In KS Call Collect (913) 284-2191
FAX 913-284-3565

RPT/11/87

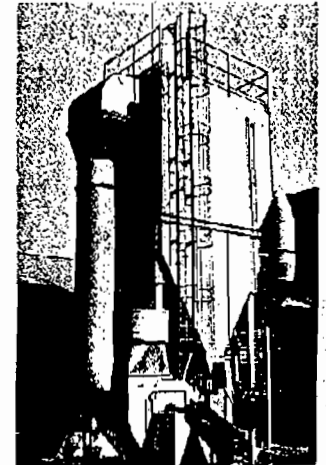
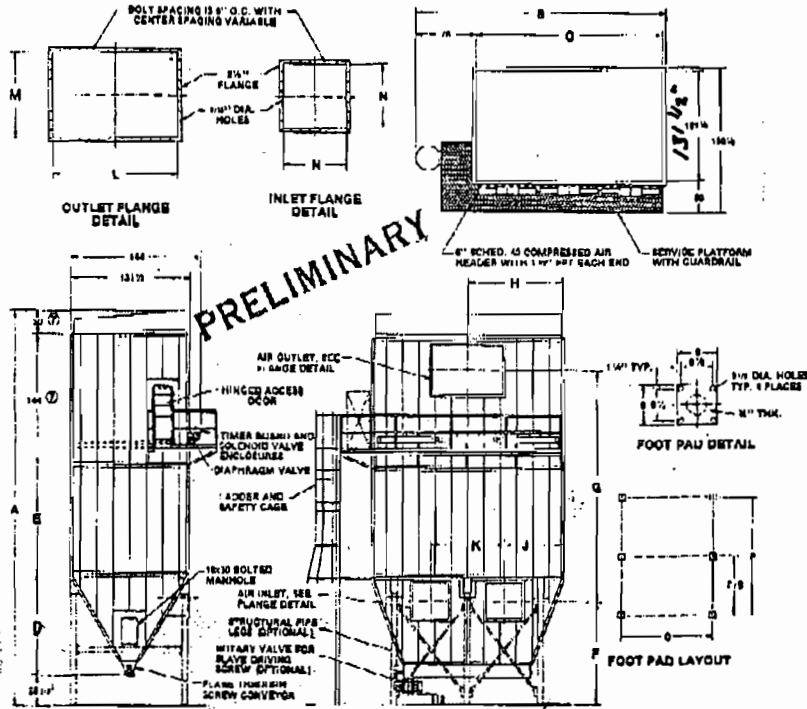


MAC

P. O. Box 205 • Sabotha, Kansas 66584 • Toll Free 1-800-223-2191 or In Kansas Call Collect 813-284-2191 FAX 813-284-3565

SECTION 2 DATA SHEET PULSE JET FILTERS Effective 7-15-88 Supersedes 8-1-86

RPT FILTER



PRELIMINARY

- NOTES: 1. All dimensions are in inches. 2. Construction is 12 ga. C.S. with reinforcement ribs for 17" W.C. differential pressure maximum. 3. Filter cleaning mechanism requires 100 PSIG of clean, dry plant air as required by application. 105-135 volt A.C. single phase, 3Ø-ØØ HZ power supply for inlet and solenoid valve operation. 4. Filter sizes 144RPT252 and smaller have four legs, sizes 144RPT280 and above have six legs. 5. Filter sizes 144RPT252 and smaller have one inlet centered along the length of the hopper. Sizes 144RPT280 and above have two equal sized inlets located as shown. 6. On the RPT196 and RPT196 filters, the hopper is rotated 90° from the view shown. 7. The filters with 120" bags and cages do not have a belted sloped roof section. The sloped roof is an integral part of the walk-in plenum. The overall height of the walk-in plenum becomes 144", and the 30" dimension does not apply.

Table with 14 columns: FILTER MODEL, SQ. FT. CLOTH, APPROX. WEIGHT, and dimensions A through P. Rows include models like 120RPT168, 144RP1168, 144RPT196, etc.

STANDARD SPECIFICATIONS FOR MAC MODEL RPT REVERSE PULSE FILTER. Materials of Construction: 12 ga. C.S. reinforced for 17" W.C. Pull welded exterior except reinforcement skip welded interior. Major Components: Walk in plenum, bag house and hopper section. Air inlets located in hoppers w perforated diffuser baffle. Timing layout includes NEMA 12 1/4" diaphragm air valves. Bag Cages: Combination venturi and hit down assembly galvanized carbon steel. Bags: snap band 12 oz. singed polyester dacron. Lifting hooks - 4 ea. Pressure differential gauge kit. Belt on access door in hopper. Support brackets. 8" Hara through auger. Service door and header assembly serve plenum and guard rail. Ladder and safety cage. Air pressure gauge. Painting: Exterior and clean air plenum interior prim with one coat 2x29 grey primer. Exterior to have one finish coat. Color to be specified. Standard color is MAC White. Alternative standard color is MAC White.

For more information see print #D00269. Information on this page subject to change without notice.

FILTER MODEL 120RPT476, 7901' CLOTH, APPROX. WT. 3100. 'A' = 387 3/8, 'B' = 370 1/2, 'C' = 291 1/2, 'D' = 111 1/4, 'E' = 104, 'F' = 111 3/4, 'G' = 233, 'H' = 145 3/4, 'J' = 83 1/2, 'K' = 123 1/2, 'L' = 116, 'M' = 56, 'N' = 50, 'O' = 114, 'P' = 247

PRELIMINARY

Attachment D

FUEL DATA
JACKSONVILLE PLANT

<u>CONTENTS</u>	<u>AMERADA HESS #6 FUEL OIL</u>	<u>WARREN PETRO. PROPANE</u>	<u>PEOPLE'S GAS NATURAL GAS</u>
Sulfur	1.45%	0%	0.2 grams/100 cu.ft
Ash	.02%	0%	0%
Density	7.984 lb./gal.	0.116 lb./cu.ft. 60° F	0.045 lb./cu.ft. 60° F
Heat Capacity	149,506 BTU/gal.	2507 BTU/CF dry vapor	1030-1040 BTU/CF
Nitrogen	N/A	0.%	0.4%

Contacts: Amerada Hess - 904/757-4498 - Richard
Warren Petroleum - 813/960-1500 - Mike
People's Gas - 904/739-1211 - Todd Widely

Tables

NEW SOURCE REVIEW (NSR) CHECKLIST

<u>Question and Rule</u>	<u>Pollutant (TPY)</u>					
	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
1. Is the existing facility a <u>major</u> facility as defined by 17-2.100 (113)? (>100 TPY)	Y(278)	Y(278)	Y(1090)	Y(267)	N(25.6)	N(5.9)
2. Would the existing facility be subject to NSR review under 17-2.500(2)(d)2. if it were new? (>250 TPY) [17-2.500 (2)(d)4.a.(i)]	Y(278)	Y(278)	Y(1090)	Y(267)	N(25.6)	N(5.9)
3. Will the modification result in a significant net emissions increase (Table 500-2)? [17-2.500(2)(d)4.a.(ii)]	N(13.9) (>25)	N(13.9) (>15)	N(39.9) (>40)	N(19.8) (>40)	N(2.9) (>100)	N(0.7) (>40)
4. Would the modification in and of itself be subject to NSR review under 17-2.500(2)(d)2.? (>250) [17-2.500(2)(d)3.]	N(13.9)	N(13.9)	N(39.9)	N(19.8)	N(2.9)	N(0.7)
5. Is the modification subject to NSR review?						
a. 17-2.500(2)(d)3.	N/A	N/A	N/A	N/A	No	No
b. 17-2.500(2)(d)4.a.	No	No	No	No	N/A	N/A
c. 17-2.500(2)(d)4.b.	N/A	N/A	N/A	N/A	N/A	N/A
6. NSR required?	No	No	No	No	No	No

EMISSIONS SUMMARY FOR EXISTING FACILITY

AND PROPOSED MODIFICATION (TONS/YEAR)

<u>Source</u>	<u>Total Particulate Matter</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO₂</u>	<u>CO</u>	<u>VOC</u>
Existing Facility	278	278	1090	267.3	25.6	5.9
Modification	13.9	13.9	39.9	19.8	2.9	0.7

Determine Present Emissions from the Existing Facility

1. Total Particulate Matter from Operating Permits

A016 - 107130	Ore crushing and conveying	21.9 TPY
A016 - 107127	Calcining kettles & material handling	172.6 TPY
A016 - 107128	Kettle fireboxes (fuel oil @ 1.5%S)	14.4 TPY
A016 - 107131	Material handling and storage bins	21.9 TPY
A016 - 107129	Wallboard Dryer (fuel oil @ 1.5% and natural gas)	24.86 TPY
A016 - 107097	Wallboard End Trim	<u>21.9 TPY</u>
		277.56 TPY

2. PM₁₀

Assume all PM emissions are less than 10 microns particle size, therefore, emissions are the same as total particulate matter.

3. Sulfur Dioxide

SO₂ emissions are maximum when firing fuel oil. Fuel oil has permitted maximum S = 1.5%.

Permitted Maximum Heat Inputs:

<u>Wallboard Dryer</u>	(Fuel Oil):	125 X 10 ⁶ Btuh	
	(Zone 1, Natural Gas):		30 X 10 ⁶ Btuh
<u>Kettle Fireboxes</u>	(Fuel Oil):	<u>33 X 10⁶ Btuh</u>	
	Total	158 X 10 ⁶ Btuh	30 X 10 ⁶ Btuh

$$\text{Fuel Oil Quantity} = \frac{158 \times 10^6 \text{ Btuh}}{1.49506 \times 10^5 \text{ Btuh/gal}} = \underline{1057 \text{ gal/hr}}$$

$$\frac{\text{AP-42 Factor for SO}_2}{\text{from fuel oil}} = 157S \frac{\text{lb, SO}_2}{10^3 \text{ gal}}$$

$$\frac{157 (1.5) \frac{\text{lb SO}_2}{10^3 \text{ gal}} \times 1.057 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{1090 \text{ tons/yr}}$$

AP-42 Factor for SO₂ = 0.6 lb/10⁶ft³
from Natural Gas

$$\frac{30 \times 10^6 \text{ Btuh} \times 0.6 \frac{\text{lb}}{10^6 \text{ ft}^3} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = \underline{0.08 \text{ TPY}}$$

Neglect

4. Nitrogen Oxides

AP-42 Factor for NO_x = 55 lb/10³gal
for Fuel Oil

AP-42 Factor for NO_x = 100 lb/10⁶ft³
for Natural Gas

Fuel Oil:

$$\frac{55 \text{ lb/10}^3 \text{ gal} \times 1.057 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{254.6 \text{ TPY}}$$

Natural Gas:

$$\frac{100 \text{ lb/10}^6 \text{ ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = \underline{12.7 \text{ TPY}}$$

Total NO_x = 267.3 TPY

5. Carbon Monoxide

AP-42 Factor for CO = 5 lb/10³gal
for Fuel Oil

AP-42 Factor for CO = 20 lb/10⁶ft³
for Natural Gas

Fuel Oil:

$$\frac{5 \text{ lb/10}^3 \text{ gal} \times 1.057 \frac{10^3 \text{ gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{23.1 \text{ TPY}}$$

Natural Gas:

$$\frac{20 \text{ lb/10}^6 \text{ ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = \underline{2.5 \text{ TPY}}$$

Total CO = 25.6 TPY

6. VOC

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Fuel Oil}} = 1.13 \text{ lb}/10^3 \text{ gal}$$

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Natural Gas}} = 5.3 \text{ lb}/10^6 \text{ Ft}^3$$

Fuel Oil:

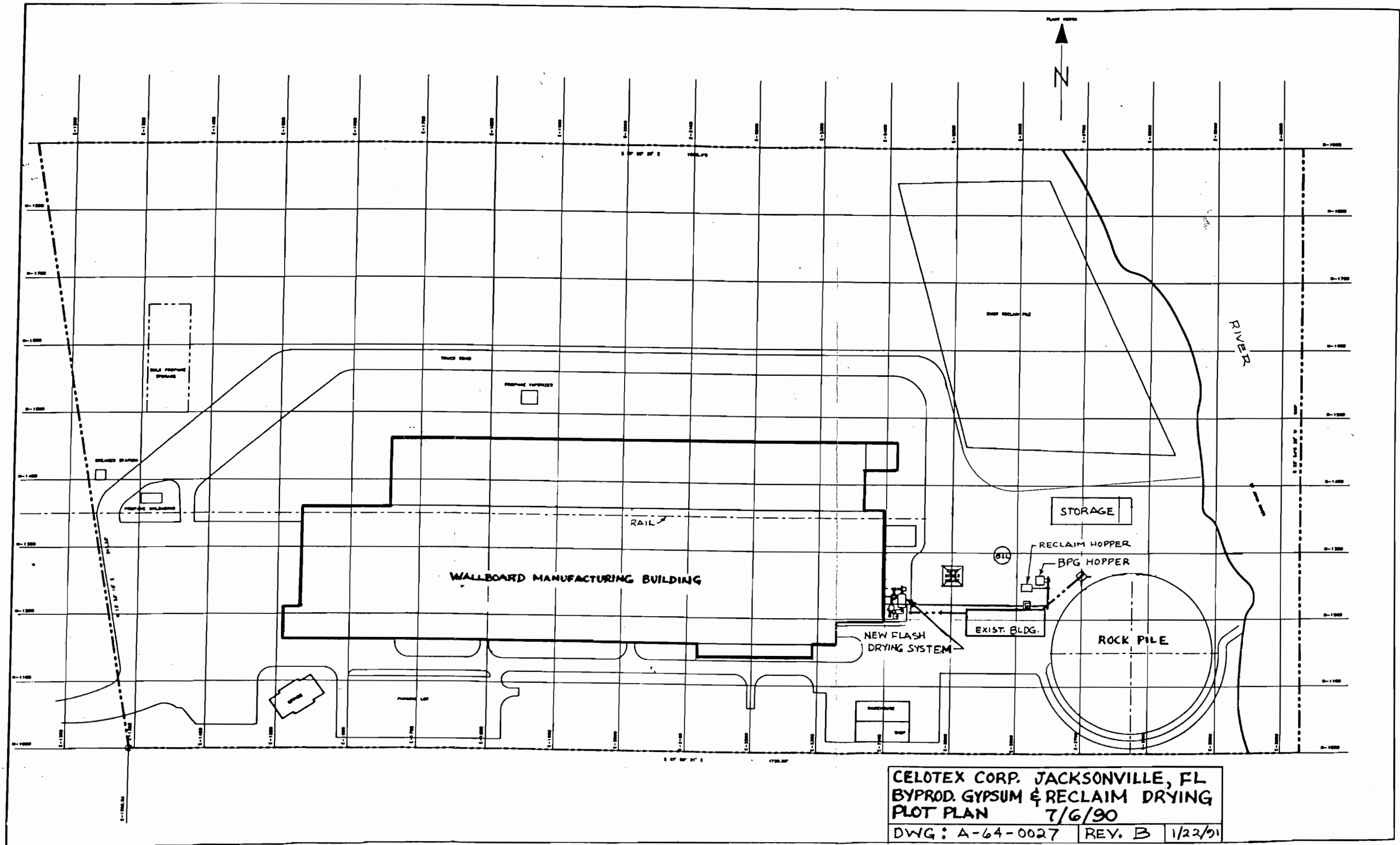
$$\frac{1.13 \text{ lb}/10^3 \text{ gal} \times 1.057 \times 10^3 \text{ gal/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = 5.2 \text{ TPY}$$

Natural Gas:

$$\frac{5.3 \text{ lb}/10^6 \text{ ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh}/10^6 \text{ ft}^3 \times 2000 \text{ lb/ton}} = 0.7 \text{ TPY}$$

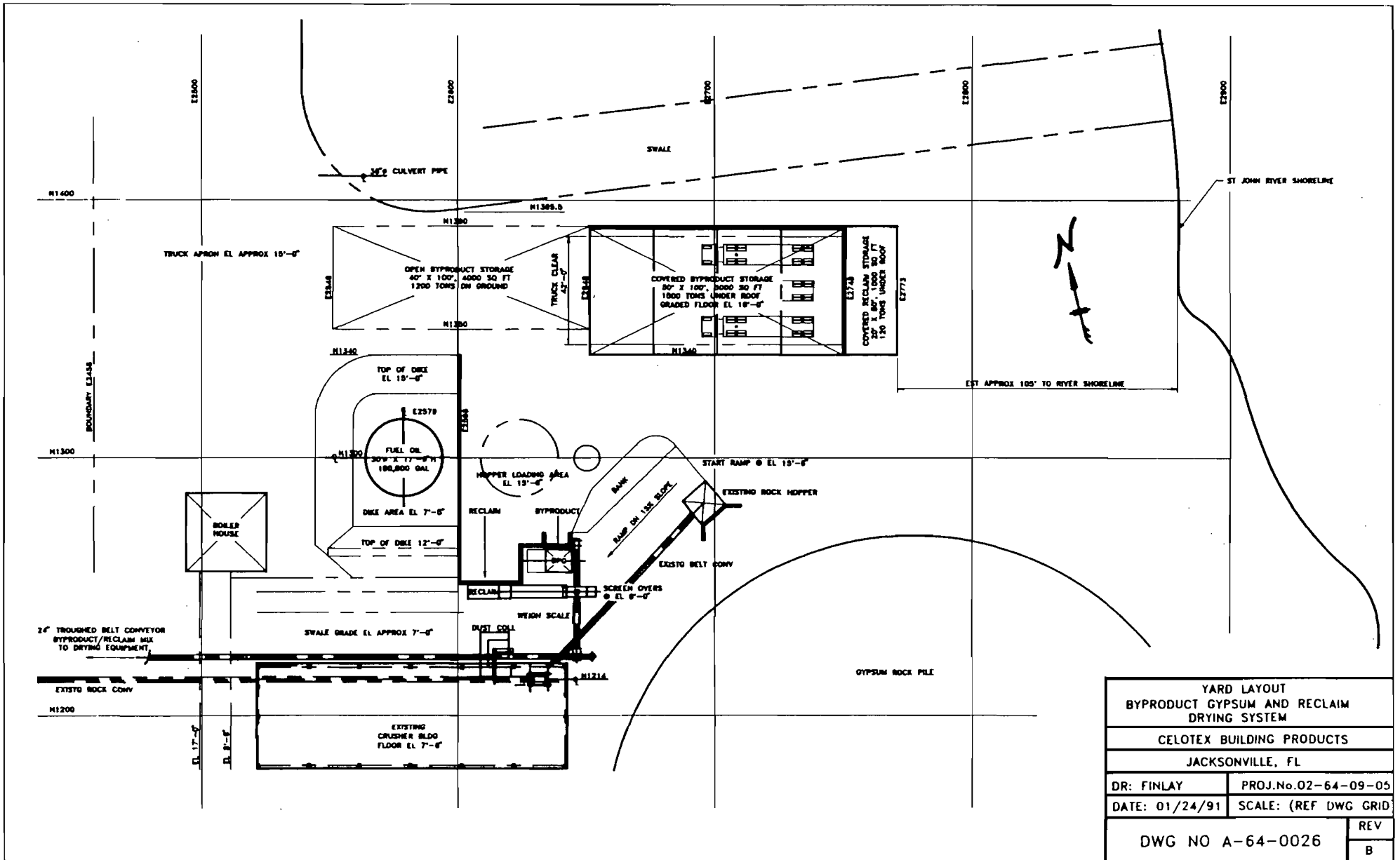
$$\text{Total VOC} = \underline{5.9 \text{ TPY}}$$

Figures



CELOTEX CORP. JACKSONVILLE, FL
 BYPROD. GYPSUM & RECLAIM DRYING
 PLOT PLAN 7/6/90
 DWG: A-64-0027 REV. B 1/22/91

FIGURE 1



YARD LAYOUT BYPRODUCT GYPSUM AND RECLAIM DRYING SYSTEM	
CELOTEX BUILDING PRODUCTS	
JACKSONVILLE, FL	
DR: FINLAY	PROJ.No.02-64-09-05
DATE: 01/24/91	SCALE: (REF DWG GRID)
DWG NO A-64-0026	
REV B	

FIGURE 2

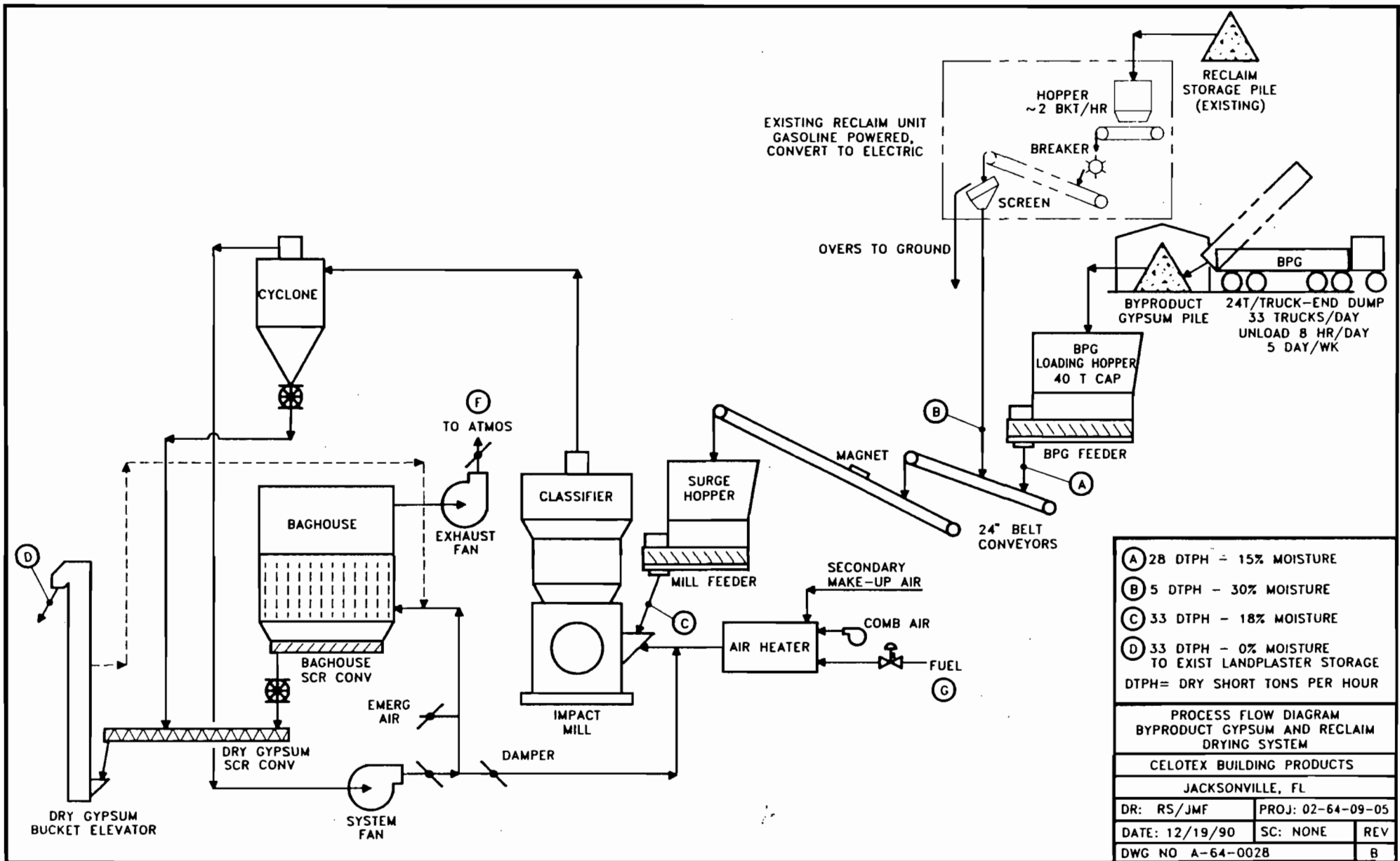


FIGURE 3

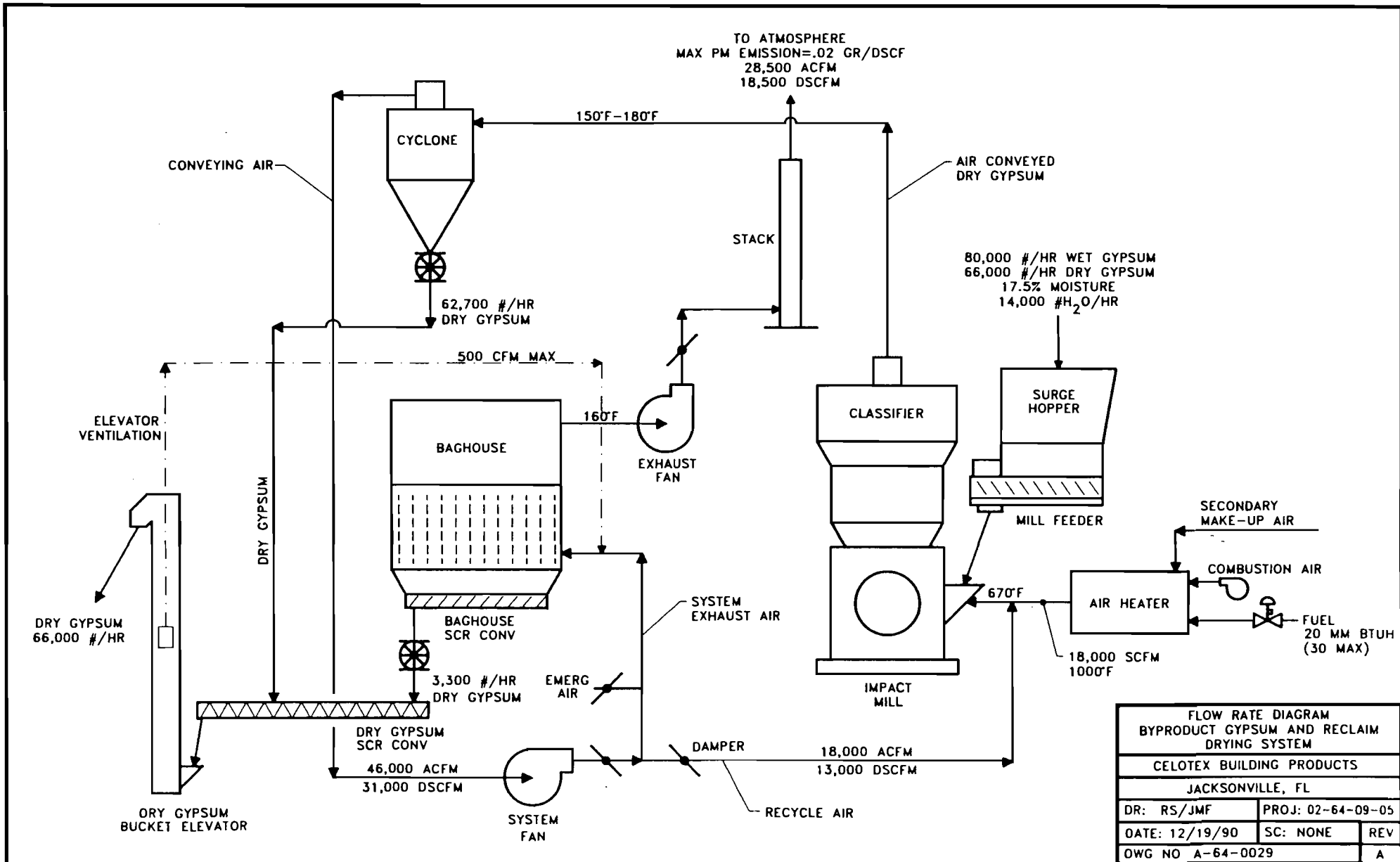
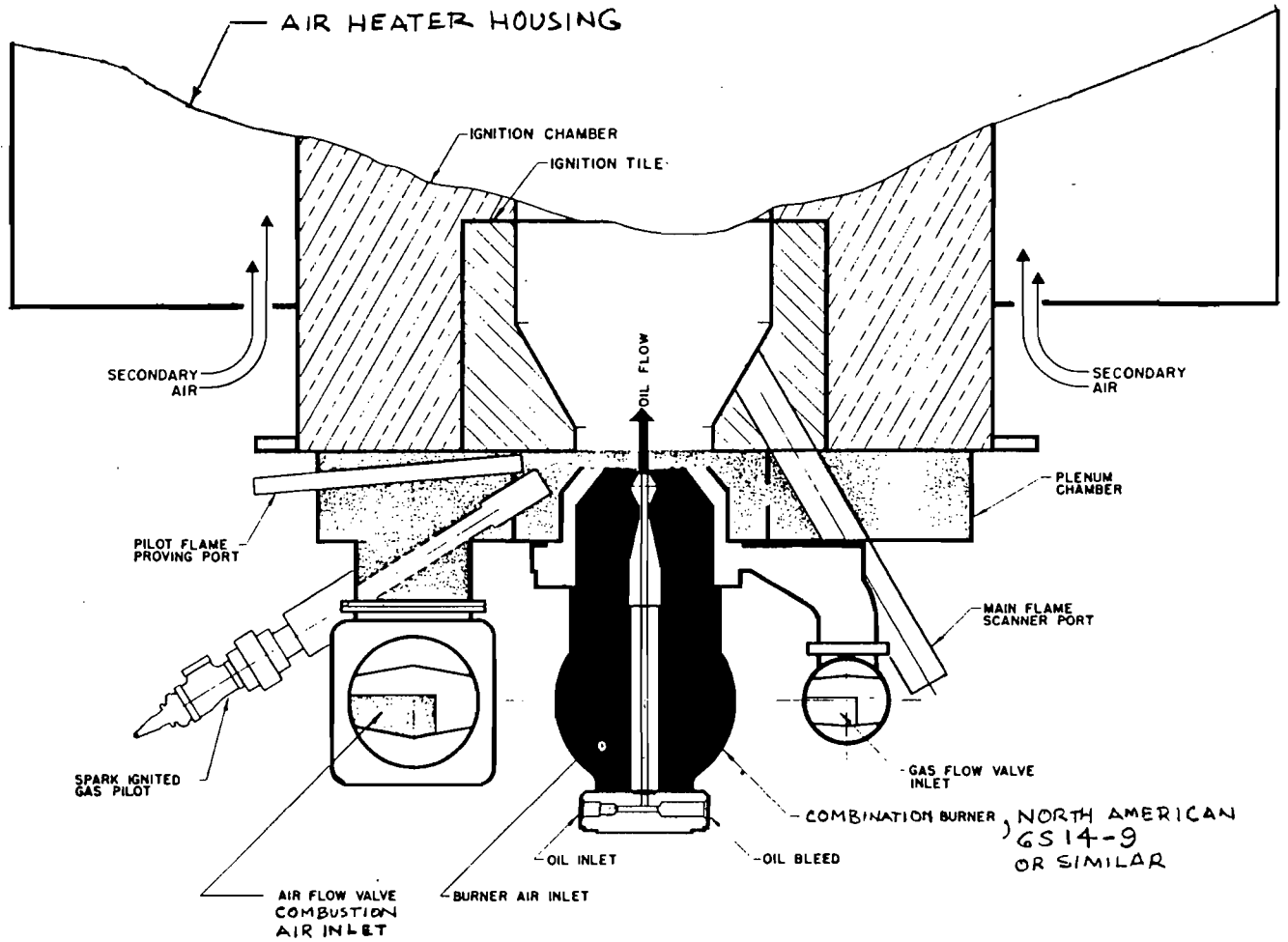


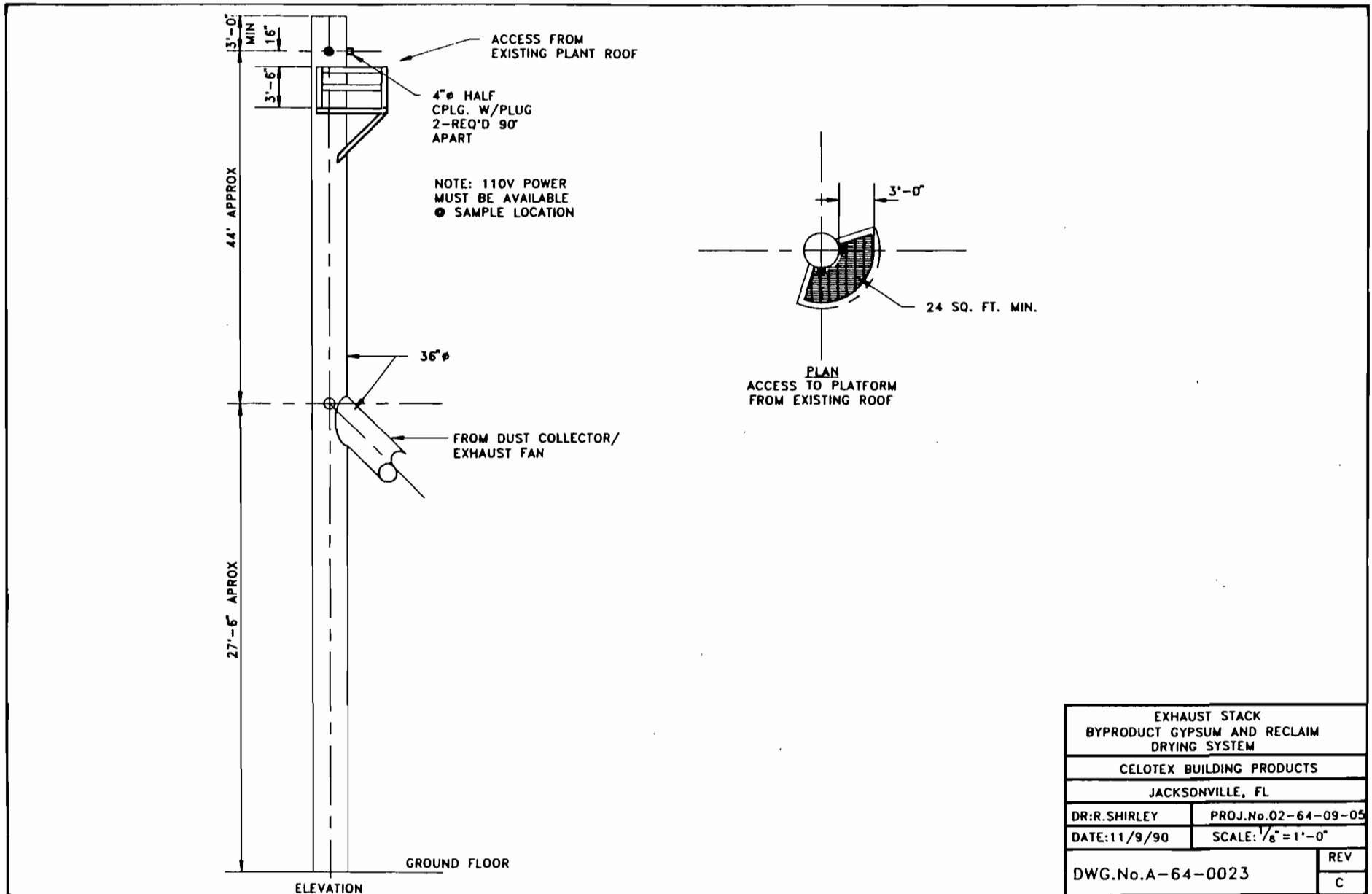
FIGURE 4



AIR HEATER BURNER SCHEMATIC	
BPG & RECLAIM DRYING SYSTEM CELOTEX BUILDING PRODUCTS JACKSONVILLE, FL	
DATE: 11/8/90	DR: F.G.
DWG: A-64-0025	REV. B

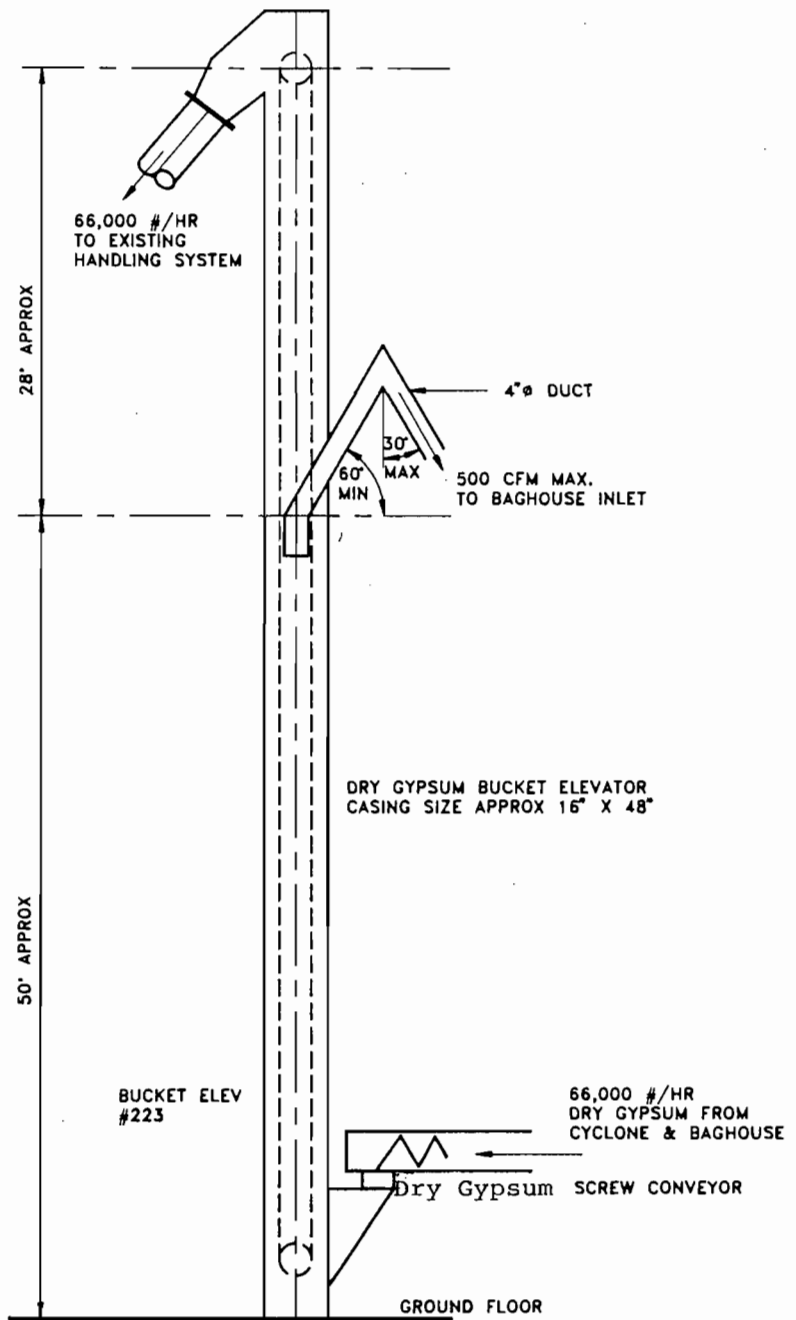
12/18/90

FIGURE 5



EXHAUST STACK BYPRODUCT GYPSUM AND RECLAIM DRYING SYSTEM	
CELOTEX BUILDING PRODUCTS	
JACKSONVILLE, FL	
DR:R.SHIRLEY	PROJ.No.02-64-09-05
DATE:11/9/90	SCALE:1/8"=1'-0"
DWG.No.A-64-0023	REV C

FIGURE 6



ELEVATION

DRY GYPSUM BUCKET ELEVATOR VENTILATION BYPRODUCT GYPSUM AND RECLAIM DRYING SYSTEM	
CELOTEX BUILDING PRODUCTS	
JACKSONVILLE, FL	
DR: R.SHIRLEY	PROJ: 02-64-09-05
DATE: 11/9/90	SCALE: 1/8" = 1'-0"
DWG NO A-64-0024	REV B

FIGURE 7

NSPS

(Approved by the office of Management and Budget under control number 2080-0120)

§ 60.648 Optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure.¹

(a) When an instantaneous sample is desired and H₂S concentration is ten grains per 1000 cubic foot or more, a 100 ml Tutwiler burette is used. For concentrations less than ten grains, a 500 ml Tutwiler burette and more dilute solutions are used. In principle, this method consists of titrating hydrogen sulfide in a gas sample directly with a standard solution of iodine.

(b) *Apparatus.* (See Figure 1.) A 100 or 500 ml capacity Tutwiler burette, with two-way glass stopcock at bottom and three-way stopcock at top which connect either with inlet tubulature or glass-stoppered cylinder, 10 ml capacity, graduated in 0.1 ml subdivision; rubber tubing connecting burette with leveling bottle.

(c) *Reagents.* (1) Iodine stock solution, 0.1N. Weight 12.7 g iodine, and 20 to 25 g cp potassium iodide for each liter of solution. Dissolve KI in as little water as necessary; dissolve iodine in concentrated KI solution, make up to proper volume, and store in glass-stoppered brown glass bottle.

(2) Standard iodine solution, 1 ml=0.001771 g I. Transfer 33.7 ml of above 0.1N stock solution into a 250 ml volumetric flask; add water to mark and mix well. Then, for 100 ml sample of gas, 1 ml of standard iodine solution is equivalent to 100 grains H₂S per cubic feet of gas.

(3) Starch solution. Rub into a thin paste about one teaspoonful of wheat starch with a little water; pour into

about a pint of boiling water; stir; let cool and decant off clear solution. Make fresh solution every few days.

(d) *Procedure.* Fill leveling bulb with starch solution. Raise (L), open cock (G), open (F) to (A), and close (F) when solutions starts to run out of gas inlet. Close (G). Purge gas sampling line and connect with (A). Lower (L) and open (F) and (G). When liquid level is several ml past the 100 ml mark, close (G) and (F), and disconnect sampling tube. Open (G) and bring starch solution to 100 ml mark by raising (L); then close (G). Open (F) momentarily, to bring gas in burette to atmospheric pressure, and close (F). Open (G), bring liquid level down to 10 ml mark by lowering (L). Close (G), clamp rubber tubing near (E) and disconnect it from burette. Rinse graduated cylinder with a standard iodine solution (0.001771 g I per ml); fill cylinder and record reading. Introduce successive small amounts of iodine thru (F); shake well after each addition; continue until a faint permanent blue color is obtained. Record reading; subtract from previous reading, and call difference D.

(e) With every fresh stock of starch solution perform a blank test as follows: introduce fresh starch solution into burette up to 100 ml mark. Close (F) and (G). Lower (L) and open (G). When liquid level reaches the 10 ml mark, close (G). With air in burette, titrate as during a test and up to same end point. Call ml of iodine used C. Then,

Grains H₂S per 100 cubic foot of gas = $100 \frac{D-C}{D}$

(f) Greater sensitivity can be attained if a 500 ml capacity Tutwiler burette is used with a more dilute (0.001N) iodine solution. Concentrations less than 1.0 grains per 100 cubic foot can be determined in this way. Usually, the starch-iodine end point is much less distinct, and a blank determination of end point, with H₂S-free gas or air, is required.

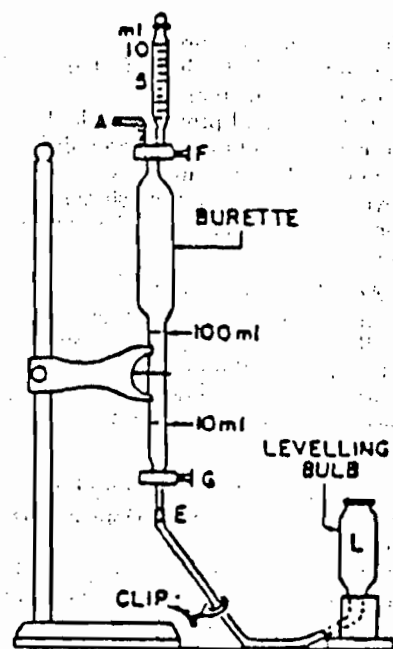


Figure 1. Tutwiler burette (lettered items mentioned in text).

Subparts MMM through NNN —
[Reserved]

[Subparts MMM — NNN added and reserved by 50 FR 7699, February 25, 1985]

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

[Subpart OOO added by 50 FR 31337, August 1, 1985]

§60.670 Applicability and designation of affected facility.

(a) Except as provided in paragraphs (b), (c) and (d) of this section, the

¹ Gas Engineers Handbook, Fuel Gas Engineering Practices, The Industrial Press, 93 Worth Street, New York, N.Y., 1966, First Edition, Second Printing, page 6/25 (Docket A-80-20-A, Entry II-1-67).

[Sec. 60.670(a)]

provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

(b) An affected facility that is subject to the provisions of Subpart F or I or that follows in the plant process any facility subject to the provisions of Subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator seeking to comply with this paragraph shall comply with the reporting requirements of §60.676(a) and (b).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after

August 31, 1983 is subject to the requirements of this part.

§60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in Subpart A of this part.

"Bagging operation" means the mechanical process by which bags are filled with nonmetallic minerals.

"Belt conveyor" means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

"Bucket elevator" means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

"Building" means any frame structure with a roof.

"Capacity" means the cumulative rated capacity of all initial crushers that are part of the plant.

"Capture system" means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more process operations to a control device.

"Control device" means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more process operations at a nonmetallic mineral processing plant.

"Conveying system" means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

"Crusher" means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

"Enclosed truck or railcar loading station" means that portion of a

nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

"Fixed plant" means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbucket, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

"Fugitive emission" means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

"Grinding mill" means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

"Initial crusher" means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

"Nonmetallic mineral" means any of the following minerals or any mixture of which the majority is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(b) Sand and Gravel.

(c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(d) Rock Salt.

(e) Gypsum.

(f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and Pyrophyllite.

(j) Boron, including Borax, Kernite, and Colemanite.

(k) Barite.

(l) Fluorospars.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

[Sec. 60.671]

(r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

"Nonmetallic mineral processing plant" means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

"Portable plant" means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

"Production line" means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

"Screening operation" means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).

"Size" means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

"Stack emission" means the particulate matter that is released to the atmosphere from a capture system.

"Storage bin" means a facility for storage (including surge bins) or nonmetallic minerals prior to further processing or loading.

"Transfer point" means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

"Truck dumping" means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

"Vent" means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

§ 60.672 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

(1) Contain particulate matter in excess of 0.05 g/dscm; or

(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device. Facilities using a wet scrubber must comply with the reporting provisions of § 60.676 (c), (d), and (e).

(b) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity, except as provided in paragraphs (c), (d) and (e) of this section.

(c) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in § 60.671.

(2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(a) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accord-

[Sec. 60.674(a)]

ance with manufacturer's instructions.

(b) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

§ 60.675 Test methods and procedures.

[60.675 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.272(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) In determining compliance with the particulate matter standards in § 60.872 (b) and (c), the owner or operator shall use Method 9 and the procedures in § 60.11, with the following additions:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(d) In determining compliance with § 60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required § 60.676(c) using the monitoring devices in § 60.674 (a) and (b) during each particulate matter run and shall determine the averages.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in tons per hour of the existing facility being replaced and
(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in tons of the existing storage bin being replaced and

(ii) The rated capacity in tons of replacement storage bins.

(b) Each owner or operator seeking to comply with § 60.670(d) shall submit the following data to the Director of the Emission Standards and Engineering Division, (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

(1) The information described in § 60.676(a).

(2) A description of the control device used to reduce particulate matter emissions from the existing facility and a list of all other pieces of equipment controlled by the same device; and

(3) The estimated age of the existing facility.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ± 30 percent from the average determined during the most recent performance test.

[60.676(d) amended by 54 FR 6662, February 14, 1989]

(e) The reports required under paragraph (d) shall be postmarked within 30 days following end of the second and fourth calendar quarters.

[Sec. 60.676(e)]

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with §60.672 (b) and (c) and reports of observations using Method 22 to demonstrate compliance with §60.672(e).

(g) The requirements of this paragraph remain in force until and unless the Agency, in delegating enforcement authority to a State under Section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with paragraphs (a), (c), (d), (e), and (f) of this subsection, provided that they comply with requirements established by the State. Compliance with paragraph (b) of this section will still be required.

[Approved by the Office of Management and Budget under control number 2060-0050]

Subpart PPP—Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

[Subpart PPP added by 50 FR 7699, February 25, 1985]

§60.680 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each rotary spin wool fiberglass insulation manufacturing line.

(b) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after February 7, 1984, is subject to the requirements of this subpart.

§60.681 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

"Glass pull rate" means the mass of molten glass utilized in the manufacture of wool fiberglass insulation at a single manufacturing line in a specified time period.

"Manufacturing line" means the manufacturing equipment comprising the form-

ing section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

"Rotary spin" means a process used to produce wool fiberglass insulation by forcing molten glass through numerous small orifices in the side wall of a spinner to form continuous glass fibers that are then broken into discrete lengths by high velocity air flow.

"Wool fiberglass insulation" means a thermal insulation material composed of glass fibers and made from glass produced or melted at the same facility where the manufacturing line is located.

§ 60.682 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

§ 60.683 Monitoring of operations.

(a) An owner or operator subject to the provisions of this subpart who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascals (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.

(b) An owner or operator subject to the provisions of this subpart who uses a wet electrostatic precipitator control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the primary and secondary current (amperes) and voltage in each electrical field and the inlet water flow rate. In addition, the owner or operator shall determine the total residue (total solids) content of the water entering the control device once per day using Method 209A, "Total Residue Dried at 103-105 °C,"

In *Standard Methods for the Examination of Water and Wastewater*, 15th Edition, 1980 (incorporated by reference—see § 60.17). Total residue shall be reported as percent by weight. All monitoring devices required under this paragraph are to be certified by their manufacturers to be accurate within ± 5 percent over their operating range. (c) All monitoring devices required under this section are to be recalibrated quarterly in accordance with procedures under § 60.13(b).

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

§ 60.684 Recordkeeping and reporting requirements.

(a) At 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(a).

(b) At 30-minute intervals during each 2-hour test run of each performance test of a wet electrostatic precipitator control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(b), except that the concentration of total residue in the water shall be recorded once during each performance test and once per day thereafter.

(c) Records of the measurements required in paragraphs (a) and (b) of this section must be retained for at least 2 years.

(d) Each owner or operator shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraphs (a) and (b) of this section and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in § 60.683(c). For the purpose of these reports, exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent performance test.

(e) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of com-

[Sec. 60.684(e)]

pliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

(Approved by the Office of Management and Budget under control number 2080-0062)

§ 60.685 Test methods and procedures.

[60.685 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.

(c) The owner or operator shall determine compliance with the particulate matter standard in § 60.682 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (C_1 Q_{vd}) / (P_{avr} K)$$

where:

E = emission rate of particulate matter, kg/Mg (lb/ton).

C₁ = concentration of particulate matter, g/dscm (g/dscf).

Q_{vd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P_{avr} = average glass pull rate, Mg/hr (ton/hr).

K = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5E shall be used to determine the particulate matter concentration (C₁) and the volumetric flow rate (Q_{vd}) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90 dscf).

(3) The average glass pull rate (P_{avr}) for the manufacturing line shall be the arithmetic average of three glass pull rate (P_i) determinations taken at intervals of at least 30 minutes during each run.

The individual glass pull rates (P_i) shall be computed using the following equation:

$$P_i = K' L_i W_m M [1.0 - (LOI/100)]$$

where:

P_i = glass pull rate at interval "i", Mg/hr (ton/hr).

L_i = line speed, m/min (ft/min).

W_m = trimmed mat width, m (ft).

M = mat gram weight, g/m² (lb/ft²).

LOI = loss on ignition, weight percent.

K' = conversion factor, 6 × 10⁻³ (min-Mg)/(hr-g) [3 × 10⁻³ (min-ton)/(hr-lb)]

(i) ASTM Standard Test Method D2584-88 (Reapproved 1979) (incorporated by reference—see § 60.17) shall be used to determine the LOI for each run.

(ii) Line speed (L_i), trimmed mat width (W_m), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.

(d) To comply with § 60.684(d), the owner or operator shall record measurements as required in § 60.684 (a) and (b) using the monitoring devices in § 60.683 (a) and (b) during the particulate matter runs.

Subpart QQQ — Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems [Added by 53 FR 47623, November 23, 1988]

§ 60.690 Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(2) An individual drain system is a separate affected facility.

(3) An oil-water separator is a separate affected facility.

(4) An aggregate facility is a separate affected facility.

(b) Notwithstanding the provisions of 40 CFR 60.14(e)(2), the construction or installation of a new individual drain system shall constitute a modification to an affected facility described in § 60.690(a)(4). For purposes of this paragraph, a new individual drain system shall be limited to all process drains and the first common junction box.

§ 60.691 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in Subpart A of 40 CFR Part 60, and the following terms shall have the specific meanings given them.

"Active service" means that a drain is receiving refinery wastewater from a pro-

cess unit that will continuously maintain a water seal.

"Aggregate facility" means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

"Catch basin" means means an open basin which serves as a single collection point for stormwater runoff received directly from refinery surfaces and for refinery wastewater from process drains.

"Closed vent system" means a system that is not open to the atmosphere and is composed of piping, connections, and if necessary, flow inducing devices that transport gas or vapor from an emission source to a control device.

"Completely closed drain system" means an individual drain system that is not open to the atmosphere and is equipped and operated with a closed vent system and control device complying with the requirements of § 60.692-5.

"Control device" means an enclosed combustion device, vapor recovery system or flare.

"Fixed roof" means a cover that is mounted to a tank or chamber in a stationary manner and which does not move with fluctuations in wastewater levels.

"Floating roof" means a pontoon-type or double-deck type cover that rests on the liquid surface.

"Gas-tight" means operated with no detectable emissions.

"Individual drain system" means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

"Junction box" means a manhole or access point to a wastewater sewer system line.

"No detectable emissions" means less than 500 ppm above background levels, as measured by a detection instrument in accordance with Method 21 in Appendix A of 40 CFR Part 60.

"Non-contact cooling water system" means a once-through drain, collection and treatment system designed and operated for collecting cooling water which does not come into contact with hydrocarbons or oily wastewater and which is not recirculated through a cooling tower.

"Oil-water separator" means wastewater treatment equipment used to separate oil from water consisting of

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 398-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

Permittee: I.D. Number: 31-16-0202-03
The Celotex Corporation Permit/Certification Number: A016-107127
P. O. Box 40569 Date of Issue: October 4, 1985
Jacksonville, Florida 32203 Expiration Date: August 31, 1990
County: Duval
Latitude/Longitude: 30:23:37/81:33:30
UTM: E-7446.430 N-3362.370
Project: Calcining Kettles and
Material Handling

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

For operation of the following sources:

- (1) Calcining kettle No. 1 (east)
- (2) Calcining kettle No. 2 (center)
- (3) Calcining kettle No. 3 (west)
- (4) Raymond mill No. 1 (east) with gypsum ore storage bin
- (5) Raymond mill No. 2 (west) with gypsum ore storage bin
- (6) Wallboard end trim
- (7) No. 7 conveyor belt drop point (APIS No. 31-16-0202-01)
- (8) Landplaster and stucco distribution systems, including bucket elevators and screw conveyors
- (9) Stucco storage bins

Particulate emission from these sources shall be controlled by a Cottrell Electrostatic Precipitator, Serial No. 2803.

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
03	Calcining kettles, Raymond mills, stucco and landplaster material handling and storage bins

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Supporting documents shall be as follows:

- (1) Permit renewal application dated July 3, 1985
- (2) Permit A016-32638 and all attachments
- (3) Particulate emissions test report dated June 18, 1985
- (4) Celotex Particulate Matter Emissions computer modeling results dated August 10, 1982

Page 1 of 5

DER FORM 17-1.201(5) Effective November 30, 1982

RECEIVED

SEP 27 1990

DER-BAQM

CONSOLIDATED CITY OF JACKSONVILLE, FLORIDA

OFFICE MEMO

DATE 9-26-90

- TO *MIRZA BAIG*
- FROM *R. L. ROBERSON - BESD*
- SUBJECT *CELOTEX CORP.*

*COPIES OF CURRENT OPERATING PERMITS
AND APPLICATIONS PER YOUR REQUEST.*

*CONSTRUCTION PERMITS WERE NOT IN FILES.
POSSIBLY NO CONSTRUCTION PERMIT ISSUED. THIS
FACILITY HAS BEEN IN EXISTENCE FOR MANY YEARS.*

RECEIVED

SEP 27 1990

DER-BAQM

REPLY REQUESTED

PERMITTEE:

The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-03
A016-107127
October 4, 1985
August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.
6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
 - a. Having access to and copying any records that must be kept under the conditions of the permit;
 - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:
 - a. a description of and cause of non-compliance; and

PERMITTEE:

The Celotex Corporation

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31-16-0202-03

A016-107127

October 4, 1985

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:	I.D. Number:	31-16-0202-03
The Celotex Corporation.	Permit/Certification Number:	A016-107127
	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
03	Particulates	6 months
	*Visible Emissions	6 months

* Shall be conducted simultaneously with particulate testing.

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
03	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.610(2)(a)	2.203

Permittee:
The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
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31-16-0202-03
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8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>OPACITY</u>
03	Particulates Visible Emissions	39.4	172.6		20% continuous

9. Operation shall be limited to 8760 hours per year.

10. Testing shall be in accordance with EPA Reference Method No. 5 for particulates.

11. Testing shall be in accordance with EPA Reference Method No. 9 for the visual determination of opacity.

12. The process weight shall be limited to a maximum of 345,200 pounds per hour.

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation


Donald C. Bayly, Division Chief


Ernest E. Frey, Manager
Northeast District

¹FAC---Florida Administrative Code

²JEPB--Jacksonville Environmental Protection Board

PERMITTEE:

The Celotex Corporation

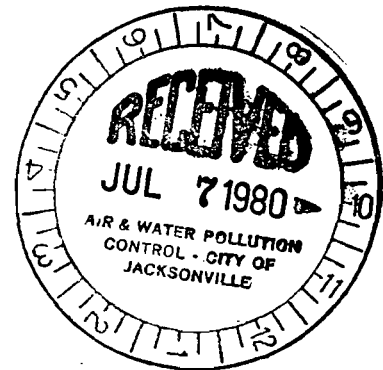
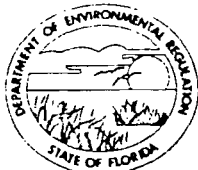
I.O. Number: 31-16-0202-03
Permit/Certification Number: A016-107127
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990

This is to certify that this document was mailed to the applicant, interested parties or their attorneys and persons who have requested in writing notice of the agency's action or proposed action before the close of business on the date indicated below:

Date: 10/4/85

FILED
SEARCHED
SERIALIZED
INDEXED
OCT 10 1985
FBI - MEMPHIS
10/4/85
Clerk

Frank Watkins
Signature



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

SOURCE TYPE: Air Pollution [] New¹ [X] Existing¹

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

COMPANY NAME: The Celotex Corporation COUNTY: Duval

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) Cottrell Electrostatic Precipitator

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville

UTM: East 7446400 North 3362600

Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Mr. J. J. McKenna, Plant Manager

APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, FL 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna, Plant Manager
Name and Title (Please Type)

Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
Name (Please Type)

(Affix Seal)

THE CELOTEX CORPORATION
Company Name (Please Type)
P. O. BOX 22602, TAMPA, FL 33622
Mailing Address (Please Type)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871-4573

¹See 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.
Cottrell precipitator provides dust collection for 3 Calcining Kettles
2 Raymond Mills, Landplaster & Stucco distribution screw conveyors and
bucket elevators, rotary stucco, cooler and board trim material. Recent
particulate testing (May 80) indicates an average emission rate of 15.0
lbs/hr. with a max. permissible emission rate of 38 lbs/hr.

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

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

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.
DER Permit No. A016-2610 Expires 8/31/80

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: _____

- G. 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? N/A
 - a. If yes, has "offset" been applied? N/A
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A
 - c. If yes, list non-attainment pollutants. _____
 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. N/A
 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. N/A
 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A
 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Gypsum			60,000	D

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

1. Total Process Input Rate (lbs/hr): 342,000
2. Product Weight (lbs/hr): 60,000

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Gypsum Dust	20.0	65.5	37.9	37.9	2,000	8,736	D

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
Cottrell Electrostatic Precipitator /n 2803	Gypsum	99%		

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

E. Fuels

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

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum N/A

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

Collected gypsum dust is returned to Calcining process

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

Stack Height: 90 ft. Stack Diameter: 3.33 ft.
 Gas Flow Rate: 42,000 ACFM Gas Exit Temperature: 160° °F.
 Water Vapor Content: 10.0 - 11.0 % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day N/A days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration
N/A	

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
N/A	

- D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration
N/A	

*Explain method of determining D 3 above.

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

10. Stack Parameters

- a. Height: ft. b. Diameter: ft.
c. Flow Rate: N/A ACFM d. Temperature: °F
e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: N/A d. Capital Cost:
e. Useful Life: N/A f. Operating Cost:
g. Energy*: h. Maintenance Cost:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: N/A d. Capital Cost:
e. Useful Life: N/A f. Operating Cost:
g. Energy**: h. Maintenance Costs:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: N/A d. Capital Cost:
e. Life: N/A f. Operating Cost:
g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

- a. Control Device
- b. Operating Principles:

c. Efficiency*:

N/A

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

N/A

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

N/A

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
N/A	N/A

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO²* _____ Wind spd/dir
 Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
 month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

N/A

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
 month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

N/A

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

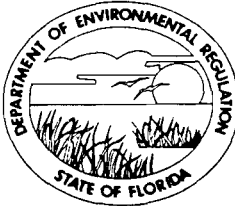
N/A

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

Permittee:	I.D. Number:	31-16-0202-04
The Celotex Corporation	Permit/Certification Number:	A016-107131
P. O. Box 40569	Date of Issue:	October 4, 1985
Jacksonville, Florida 32203	Expiration Date:	August 31, 1990
	County:	Duval
	Latitude/Longitude:	30:23:37/81:33:30
	UTM:	E-7446.430 N-3362.370
	Project:	Material Handling Equipment and Storage Bins

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

For operation of the material handling equipment including screw conveyors, bucket elevators and storage bins. Particulate emissions from the following sources shall be controlled by a 10,000 CFM FlexKleen Model UDC-104L dust collector identified as the No. 9 baghouse:

- (1) No. 15 (east) stucco surge bin - loading
- (2) No. 16 (middle) stucco surge bin - loading
- (3) No. 17 (middle) stucco surge bin - loading
- (4) No. 18 (west) stucco surge bin - loading
- (5) Stucco surge bin screw conveyors - unloading
- (6) Block accelerator stucco grinders No.'s 1-5
- (7) Pin mixer
- (8) Starch storage bin (2000 pound capacity loaded from 100 pound bags)
- (9) Two (2) stucco surge bin bucket elevators

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
04	Material handling equipment

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Supporting documents shall be as follows:

- (1) Permit renewal application dated July 3, 1985
- (2) Permit A016-32633 and all attachments
- (3) Visible emissions test dated July 11, 1985
- (4) Celotex Particulate Matter Emissions computer modeling results dated August 10, 1982

PERMITTEE:

The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-04
A016-107131
October 4, 1985
August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.
6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
 - a. Having access to and copying any records that must be kept under the conditions of the permit;
 - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

PERMITTEE:

The Celotex Corporation

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31-16-0202-04

A016-107131

October 4, 1985

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:
The Celotex Corporation

I.D. Number: 31-16-0202-04
Permit/Certification Number: A016-107131
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall not be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
04	Particulates	Upon request
	Visible Emissions	12 months

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
04	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.700(3)(d)	2.501

Permittee:
The Celotex Corporation.

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-04
A016-107131
October 4, 1985
August 31, 1990

8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>OPACITY</u>
04	Particulates Visible Emissions	5	21.9		5% continuous

9. Operation shall be limited to 8760 hours per year.

10. Testing shall be performed in accordance with EPA Reference Method No. 5 for particulates.


11. Testing shall be performed in accordance with EPA Reference Method No. 9 for the visual determination of opacity.


12. The process weight shall be limited to 45,800 pounds per hour of gypsum dust.

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation


Donald C. Bayly, Division Chief


Ernest E. Frey, Manager
Northeast District

¹FAC---Florida Administrative Code

²JEPB--Jacksonville Environmental Protection Board

BEST AVAILABLE COPY

PERMITTEE:

The Celotex Corporation

I.D. Number: 31-16-0202-04
Permit/Certification Number: A016-107131
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990.

This is to certify that this document was mailed to the applicant, interested parties or their attorneys and persons who have requested in writing notice of the agency's action or proposed action before the close of business on the date indicated below:

Date: 10/4/85

FILED AND ACKNOWLEDGED
Filed on this date, pursuant to Section 101.10, in
Suitcase No. the designated Department Clerk
received which is hereby acknowledged.

[Signature] 10/4/85
Clerk

[Signature]
Signature

PERMITTED

BY

LOWER ST. JOHNS RIVER SUB DISTRICT
DEPARTMENT OF ENVIRONMENTAL REGULATION

PERMIT NO. AD16-32633

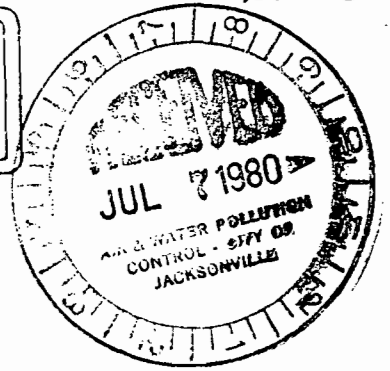
DATE 11/26/80



ST. JOHNS RIVER

NOV 25 1980

STATE OF FLORIDA SUB DISTRICT - JAX
DEPARTMENT OF ENVIRONMENTAL REGULATION



BES

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution [] New¹ [X] Existing¹

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

COMPANY NAME: The Celotex Corporation COUNTY: Duval

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) #9 Baghouse

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville

UTM: East 7446400 North 3362600

Latitude 0 ° 0 ' 0 "N Longitude 0 ° 0 ' 0 "W

APPLICANT NAME AND TITLE: Mr. J. J. McKenna Plant Manager

APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, FL 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]

J. J. McKenna, Plant Manager
Name and Title (Please Type)

Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]

EDUARDO CARDONA
Name (Please Type)

THE CELOTEX CORPORATION
Company Name (Please Type)

P. O. BOX 22602, TAMPA FL 33622
Mailing Address (Please Type)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871-4573

¹See 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.

#9 Baghouse provides venting for screw conveyors, bucket,
elevators and storage bins used to transfer calcired gypsum.
Collection efficiency rated at 99.8%.
Renewal of DER permit No. A016-2603.

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

Start of Construction N/A Completion of Construction N/A

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

N/A

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

DER permit No. A016-2603 Issued 9/21/76 Expires 8/31/80

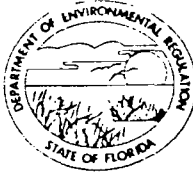
E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: _____

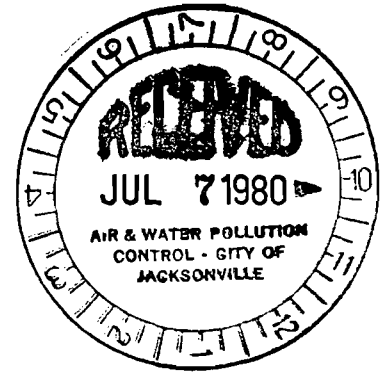
G. If this is a new source or major modification, answer the following questions. (Yes or No)

- | | |
|---|------------|
| 1. Is this source in a non-attainment area for a particular pollutant? | <u>N/A</u> |
| a. If yes, has "offset" been applied? | <u>N/A</u> |
| b. If yes, has "Lowest Achievable Emission Rate" been applied? | <u>N/A</u> |
| c. If yes, list non-attainment pollutants. | |
| 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. | <u>N/A</u> |
| 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. | <u>N/A</u> |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? | <u>N/A</u> |
| 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? | <u>N/A</u> |

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



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



SOURCE TYPE: Air Pollution New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification
COMPANY NAME: The Celotex Corporation COUNTY: Duval

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) #9 Baghouse

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville
UTM: East 7446400 North 3362600
Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Mr. J. J. McKenna Plant Manager
APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, FL 32226

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna, Plant Manager
Name and Title (Please Type)
Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
Name (Please Type)
THE CELOTEX CORPORATION
Company Name (Please Type)
P. O. BOX 22602, TAMPA FL 33622
Mailing Address (Please Type)

(Affix Seal)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871-4573

¹See 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.

#9 Baghouse provides venting for screw conveyors, bucket,
elevators and storage bins used to transfer calcired gypsum.
Collection efficiency rated at 99.8%.
Renewal of DER permit No. A016-2603.

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

Start of Construction N/A Completion of Construction N/A

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

N/A

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

DER permit No. A016-2603 Issued 9/21/76 Expires 8/31/80

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52*; if power plant, hrs/yr _____; if seasonal, describe: _____
** 8400 hr/yr used in calculations = 7x24x60*

G. 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? | <u>N/A</u> |
| a. If yes, has "offset" been applied? | <u>N/A</u> |
| b. If yes, has "Lowest Achievable Emission Rate" been applied? | <u>N/A</u> |
| c. If yes, list non-attainment pollutants. | |
| <hr/> | |
| 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. | <u>N/A</u> |
| 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. | <u>N/A</u> |
| 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? | <u>N/A</u> |
| 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? | <u>N/A</u> |

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

E. Fuels

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

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis: N/A

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

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

Collected gypsum is returned to the gypsum board manufacturing process.

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

Stack Height: 37 ft. Stack Diameter: Rectangular 1.78 sq. ft.

Gas Flow Rate: 10,000 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Description of Waste N/A

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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		
Gypsum	Gyp. Dust	100	45,800	F
		10.9		

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

1. Total Process Input Rate (lbs/hr): 45,800

2. Product Weight (lbs/hr): 45,800

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Gypsum Dust	1.0	4.2	No Visible Emissions		500	2100	F
		(4.38) @ 8760 hr/yr SP2				(2190) @ 8760 hr/yr SP2	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
Flexkleen Baghouse Model UDC 104L	Gypsum Dust	99.8	+3	Design Data

¹ See Section V, Item 2.

² Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³ Calculated from operating rate and applicable standard

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

⁵ If Applicable

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO² _____ Wind spd/dir
Period of monitoring _____ / ____ / ____ to _____ / ____ / ____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

N/A

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / ____ / ____ to _____ / ____ / ____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

N/A

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

N/A

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
NA	A

(8) Process Rate*:

10. Reason for selection and description of systems:

11

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

- a. Control Device
- b. Operating Principles:

c. Efficiency*:

N/A

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(5) Environmental Manager:

(6) Telephone No.:

N/A (4) State:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

N/A

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

10. Stack Parameters

- a. Height: *N/A* ft. b. Diameter: ft.
c. Flow Rate: *N/A* ACFM d. Temperature: °F
e. Velocity: *N/A* FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: *N/A* d. Capital Cost:
e. Useful Life: *N/A* f. Operating Cost:
g. Energy*: h. Maintenance Cost:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: *N/A* d. Capital Cost:
e. Useful Life: *N/A* f. Operating Cost:
g. Energy**: h. Maintenance Costs:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: *N/A* d. Capital Cost:
e. Life: *N/A* f. Operating Cost:
g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration
N/A	

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
N/A	

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration
N/A	

*Explain method of determining D 3 above.

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

NA

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

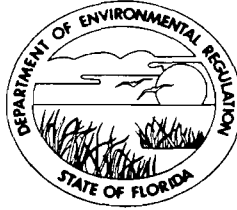
Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

Permittee:	I.D. Number:	31-16-0202-01
The Celotex Corporation	Permit/Certification Number:	A016-107130
P. O. Box 40569	Date of Issue:	October 4, 1985
Jacksonville, Florida 32203	Expiration Date:	August 31, 1990
	County:	Duval
	Latitude/Longitude:	30:23:37/81:33:30
	UTM:	E-7446.430 N-3362.370
	Project:	Gypsum Ore Crushing System and Conveyors

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

For operation of the gypsum ore crushing system subsequent to the storage pile to include a Pennsylvania Impactor (hammermill) Model #C3-36, Serial #4086 and the #2 and #7 conveyor belts. Fugitive emissions from the hammermill, the drop point of the #2 conveyor and the beginning of the #7 conveyor shall be controlled "as needed" by a FlexKleen Model UDC-80L dust collector identified as baghouse #12. Fugitive emissions from the drop point of the #7 conveyor (located at top of storage bins above the Raymond Mills) shall be controlled by the Cottrell Electrostatic Precipitator under separate permit (APIS No. 31-16-0202-03).

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
01	Hammermill and conveyor drop points

Supporting documents shall be as follows:

1. Permit renewal application dated July 3, 1985
2. Permit A016-32634 and all attachments
3. BESD inspection report dated April 2, 1982
4. Celotex Particulate Matter Emissions computer modeling results dated August 10, 1982

BEST AVAILABLE COPY

PERMITTEE:	I.D. Number:	31-16-0202-01
	Permit/Certification Number:	A016-107130
The Celotex Corporation	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.
6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
 - a. Having access to and copying any records that must be kept under the conditions of the permit;
 - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

PERMITTEE:

The Celotex Corporation

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31-16-0202-01

A016-107130

October 4, 1985

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:	I.D. Number:	31-16-0202-01
The Celotex Corporation	Permit/Certification Number:	A016-107130
	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall not be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
01	Particulate	Upon request
01	Visible emissions	12 months

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
01	Particulate	17-2.650(2)(b)2.	2.207
01	Visible emissions	17-2.700(3)(d)	2.501

Permittee:	I.D. Number:	31-16-0202-01
The Celotex Corporation	Permit/Certification Number:	A016-107130
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	Expiration Date:	August 31, 1990

8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>% OPACITY</u>
01	Particulate	5	21.9		
01	Visible Emissions				5 continuous

9. Operation shall be limited to 8760 hours per year.

10. Testing shall be performed in accordance with EPA Reference Method No. 5 for particulates.

11. Testing shall be performed in accordance with EPA Reference Method No. 9 for the visual determination of opacity.

12. The process weight shall be limited to a maximum of 150,000 pounds per hour of gypsum rock.

13. Unconfined particulate emissions from yard operations, open stockpiling of materials and/or materials handling operations shall be controlled by using one (1) or more of the following reasonable precautions in accordance with Rule 17-2.610(3), FAC:

Reduced speeds for vehicular traffic.

Use of liquid resinous adhesives or other liquid dust suppressants or wetting agents.

Use of paving or other asphaltic materials.

Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping.

Covering of trucks, trailers, front end loaders, and other vehicles or containers to prevent spillage of particulate matter during transport.

Use of mulch, hydroseeding, grassing and/or other vegetative ground cover on barren areas to prevent or reduce particulate matter from being windblown.

Use of hoods, fans, filters, and similar equipment to contain, capture, and vent particulate matter.

Enclosure or covering of conveyor systems.

BEST AVAILABLE COPY

Permittee:
The Celotex Corporation.

I.D. Number: 31-16-0202-01
Permit/Certification Number: A016-107130
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation

Donald C. Bayly
Donald C. Bayly, Division Chief

Ernest E. Frey
for Ernest E. Frey, Manager
Northeast District

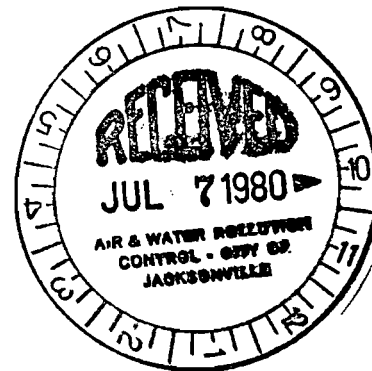
- ¹FAC---Florida Administrative Code
- ²JEPB--Jacksonville Environmental Protection Board

This is to certify that this document was mailed to the applicant, interested parties or their attorneys and persons who have requested in writing notice of the agency's action or proposed action before the close of business on the date indicated below:

Date: 10/4/85

RECEIVED AND ACKNOWLEDGEMENT
I, _____, pursuant to § 2182 (9), Florida
Statutes, as designated _____ Clerk,
received this document and hereby acknowledged.
Ed Jeff 10/4/85
Clerk

Ernest E. Frey
Signature



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

SOURCE TYPE: Air Pollution [] New¹ [X] Existing¹
 APPLICATION TYPE: [] Construction [X] Operation [] Modification
 COMPANY NAME: The Celotex Corporation COUNTY: Duval

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) #12 Baghouse

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville
 UTM: East 7446400 North 3362600
 Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Mr. J.J. McKenna, Plant Manager
 APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, FL 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]
J.J. McKenna, Plant Manager
 Name and Title (Please Type)
 Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
 Name (Please Type)
THE CELOTEX CORPORATION
 Company Name (Please Type)
P. O. BOX 22602, TAMPA, FL 33622
 Mailing Address (Please Type)

(Affix Seal)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871 4573

¹See 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.

#12 Baghouse vents material handling equipment in the rock crushing dept. -- belt conveyors and vibrating screen.
Collection efficiency rated at 99.8%.
Renewal of DER Permit No. A016-2604.

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

Start of Construction N/A Completion of Construction _____

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

N/A

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

DER Permit No. A016-2604 Issued 9/21/76 Expires 8/31/80.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 16 ; days/wk 7 ; wks/yr 52 * ; if power plant, hrs/yr 524 (524) ;
 if seasonal, describe: 5600 hrs used in calculation
5600 = 16 x 7 x 50

G. 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? N/A
 - a. If yes, has "offset" been applied? N/A
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A
 - c. If yes, list non-attainment pollutants. _____
- 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. N/A
- 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. N/A
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A
- 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Gypsum (unclaimed)	Gyp. Dust	100	150,000	B
		153		

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

1. Total Process Input Rate (lbs/hr): 150,000

2. Product Weight (lbs/hr): 150,000

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Gypsum Dust	1.0	2.8	No Visible Emissions		500est	1400	B
		(2.9 T/yr)				1456 T/yr	
		(@ 5824 hr/yr)				@ 3124 hr/yr	
						(5824)	

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
Flexkleen Baghouse Model UDC-80L	Gypsum Dust	99.8	+3	Design Data

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

E. Fuels

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

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

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

N/A

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

Stack Height: 25 ft. Stack Diameter: Rectangular 1.56 ft.

Gas Flow Rate: 7500 ACFM Gas Exit Temperature: 120 °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration
N/A	

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration
N/A	

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
N/A	

D. Describe the existing control and treatment technology (if any).

- 1. Control Device/System:
- 2. Operating Principles:
- 3. Efficiency: *
- 4. Capital Costs:
- 5. Useful Life:
- 6. Operating Costs:
- 7. Energy:
- 8. Maintenance Cost:
- 9. Emissions:

Contaminant	Rate or Concentration
N/A	

*Explain method of determining D 3 above.

10. Stack Parameters

- a. Height: *N/A* ft.
- b. Diameter: ft.
- c. Flow Rate: *N/A* ACFM
- d. Temperature: °F
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space and operate within proposed levels:
- 4.
- a. Control Device
 - b. Operating Principles:
 - c. Efficiency*: *N/A*
 - d. Capital Cost:
 - e. Life:
 - f. Operating Cost:
 - g. Energy:
 - h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*: *N/A*
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

- a.
 - (1) Company:
 - (2) Mailing Address:
 - (3) City: *N/A*
 - (4) State:
 - (5) Environmental Manager:
 - (6) Telephone No.:

*Explain method of determining efficiency above.

- (7) Emissions*:

Contaminant	Rate or Concentration

- (8) Process Rate*:

- b.
 - (1) Company: *N/A*
 - (2) Mailing Address:
 - (3) City:
 - (4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO²* _____ Wind spd/dir

Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

N/A

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

N/A

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicant's Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

N/A

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
N/A	A

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

ITEM C - #12 BAGHOUSE - A016-2604

1. Yes
2. Collector Efficiency 99.8%.

Emission Rate = $100.0\% - 99.8\% = 0.2\%$ or .002.

Gypsum Collected = 500 lbs./hr.

Actual Emission (lbs./hr.) = $500\#/hr \times .002 = 1.0\#/hr.$

Actual Emission (tons/yr.) = $1.0\#/hr. \times 5600 \text{ hrs./yr.} \times$
 $1 \text{ ton}/2000 \text{ lbs.} = 2.8 \text{ tons/year.}$

Potential Emission assumes complete escape of 500 lb./hr.
input rate to atmosphere.

Potential Emission (tons/yr.) = $500\#/hr. \times 5600 \text{ hrs/yr.} \times$
 $1 \text{ ton}/2000 \text{ lbs.} = 1400 \text{ tons/year.}$



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

Permittee: I.D. Number: 31-16-0202-(08,13,14,15)
The Celotex Corporation Permit/Certification Number: A016-107129
P. O. Box 40569 Date of Issue: October 4, 1985
Jacksonville, Florida 32203 Expiration Date: August 31, 1990
County: Duval
Latitude/Longitude: 30:23:37/81:33:30
UTM: E-7446.430 N-3362.370
Project: Wallboard Drying Kiln

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

For operation of the wallboard drying kiln firing propane or No. 5 fuel oil. Emissions from the three Hauck Model 784 PAE LX burners having a maximum total heat input of 50×10^6 BTU/hr and the Urquhart Model MK IV Size 10 burner having a maximum heat input of 25×10^6 BTU/hr are uncontrolled.

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
08	Urquhart burner located in Zone "A" (west end)
13	Hauck burner located in Zone 1 (middle)
14	Hauck burner located in Zone 2 (middle)
15	Hauck burner located in Zone 3 (east end)

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Supporting documents shall be as follows:

- (1) Permit renewal application dated July 3, 1985
- (2) Permit A016-32636 and all attachments
- (3) Visible emissions test dated July 11, 1985
- (4) Celotex Particulate Matter Emissions computer modeling dated August 10, 1985

BEST AVAILABLE COPY

PERMITTEE:

The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-(08,13,14,15)
A016-107129
October 4, 1985
August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.
6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
 - a. Having access to and copying any records that must be kept under the conditions of the permit;
 - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:
 - a. a description of and cause of non-compliance; and

PERMITTEE:

The Celotex Corporation

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31-16-0202-(08.13,14,15)

A016-107129

October 4, 1985

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:	I.D. Number:	31-16-0202-(08,13,14,15)
The Celotex Corporation	Permit/Certification Number:	A016-107129
	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall not be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
08	Particulates	Upon Request
	Visible Emissions	Upon Request
13	Particulates	Upon Request
	Visible Emissions	Upon Request
14	Particulates	Upon Request
	Visible Emissions	Upon Request
15	Particulates	Upon Request
	Visible Emissions	Upon Request

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
08	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.610(2)(a)	2.203
13	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.610(2)(a)	2.203
14	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.610(2)(a)	2.203
15	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.610(2)(a)	2.203

Permittee:
The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-(08,13,14,15)
A016-107129
October 4, 1985
August 31, 1990

8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>OPACITY</u>
08	Particulates	2.5	11.0		
	Visible Emissions				20% continuous
13	Particulates	2.0	8.8		
	Visible Emissions				20% continuous
14	Particulates	1.5	6.6		
	Visible Emissions				20% continuous
15	Particulates	1.5	6.6		
	Visible Emissions				20% continuous

9. Operation shall be limited to 8760 hours per year.

10. Testing shall be performed in accordance with EPA Reference Method No. 5 for particulates.

11. Testing shall be performed in accordance with EPA Reference Method No. 9 for the visual determination of opacity.

12. The process weight shall be limited to a maximum of 100,674 pounds per hour.

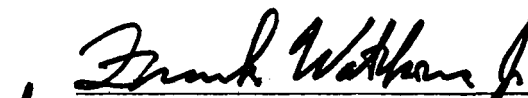
13. The No. 5 fuel oil shall be limited to a maximum of 1.5% sulfur content by weight. Sulfur analysis of the fuel oil shall be performed in accordance with ASTM D 2622-82 (Sulfur in Petroleum Products - X-RAY Spectrographic Method) or other method approved in advance by BESD. Analysis shall be submitted to BESD upon request.

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation


Donald C. Bayly, Division Chief


Ernest E. Frey, Manager
Northeast District

¹FAC---Florida Administrative Code

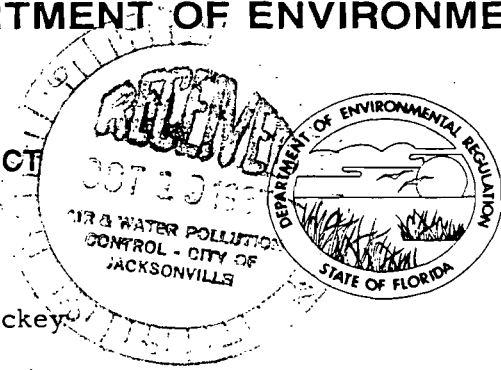
²JEPB--Jacksonville Environmental Protection Board

1250
BES

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER
GARY L. SHAFFER
ASSISTANT DISTRICT MANAGER

Mr. Lawrence M. Hickey
Plant Manager
The Celotex Corporation
P.O. Box 40569
Jacksonville, FL 32203

October 15, 1987

**Re: Duval County - AP
The Celotex Corporation
Wallboard Drying Kiln - Permit No. A016-107129**

Dear Mr. Hickey:

The Bio-Environmental Services Division (BESD) and the Department of Environmental Regulation (DER) have approved the revision of the captioned permit as follows:

FROM: For operation of the wallboard drying kiln firing propane or No. 5 fuel oil. Emissions from the three Hauck Model 784 PAE LX burners having a maximum total heat input of 50×10^6 BTU/hr and the Urquhart Model MK IV Size 10 burner having a maximum heat input of 25×10^6 BTU/hr are uncontrolled.

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
08	Urquhart burner located in Zone "A" (west end)
13	Hauck burner located in Zone 1 (middle)
14	Hauck burner located in Zone 2 (middle)
15	Hauck burner located in Zone 3 (east end)

TO: For the operation of the wallboard drying kiln with four (4) burners. Emissions from the burners vent through three (3) thirty foot and one (1) fifty foot stack to the ambient air.

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
08	Urquhart burner located in Zone 1 (west end)
13	Maxon LO NO _x burner located in Zone 2 (middle)
14	Hauck burner located in Zone 3 (middle)
15	Hauck burner located in Zone 4 (east end)

Specific Condition No. 8

FROM: The allowable emissions shall be as follows:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>Other</u>	<u>Opacity</u>
08	Particulates	2.5	11.0		
	Visible Emissions				20% continuous
13	Particulates	2.0	8.8		
	Visible Emissions				20% continuous
14	Particulates	1.5	6.6		
	Visible Emissions				20% continuous
15	Particulates	1.5	6.6		
	Visible Emissions				20% continuous

TO: The maximum allowable emissions shall be as follows:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>Other</u>	<u>Opacity</u>
08	Particulate Matter (PM)	2.5	11.0		
	Visible Emissions (VE)				20% continuous
13	PM	0.15	.66		
	VE				20% continuous
14	PM	1.5	6.6		
	VE				20% continuous
15	PM	1.5	6.6		
	VE				20% continuous

Specific Condition No. 14

Heat input shall be limited as follows:

<u>Point</u>	<u>Maximum Heat Input</u>	<u>Fuel</u>
08	25 x 10 ⁶ BTUs/hr	Propane or No. 5 fuel
13	30 x 10 ⁶ BTUs/hr	Propane only
14	50 x 10 ⁶ BTUs/hr	Propane or No. 5 fuel
15	50 x 10 ⁶ BTUs/hr	Propane or No. 5 fuel

This letter shall be attached to, and becomes part of, the referenced permit.

Please direct any questions concerning this matter to the BESD office at (904) 630-3210.

Very truly yours,

City of Jacksonville
 Bio-Environmental Services Division

State of Florida
 Department of Environmental Regulation


 Donald C. Bayly, Division Chief


 Ernest E. Frey, District Manager

EEF/DCB/JL/bgm
 cc: Mr. Bill Stewart, P.E., DER
 BESD Air Permitting File
 BESD File 1230 D

BEST AVAILABLE COPY

PERMITTEE:

The Celotex Corporation

I.D. Number: 31-16-0202-(08,13,14,15)
Permit/Certification Number: A016-107129
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990

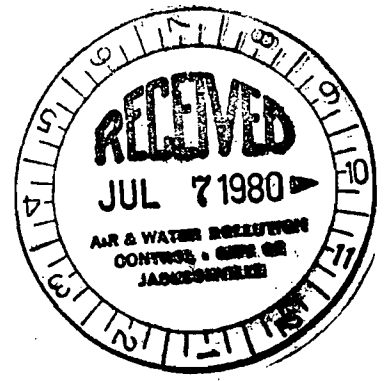
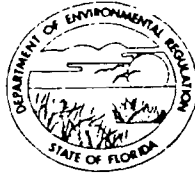
This is to certify that this document was mailed to the applicant, interested parties or their attorneys and persons who have requested in writing notice of the agency's action or proposed action before the close of business on the date indicated below:

Date: 10/4/85

FILING AND ACKNOWLEDGEMENT
FILED on this date, pursuant to Section 197, Florida
Statutes with the designated instrument clerk,
recognition which is hereby acknowledged.

Ed Dept 10/4/85

Frank Watkinson Jr
Signature



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

SOURCE TYPE: Air Pollution New¹ Existing¹
 APPLICATION TYPE: Construction Operation Modification
 COMPANY NAME: The Celotex Corporation COUNTY: Duval
 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) Wallboard Dryer - Propane or #5 fuel oil fired.
 SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville,
 UTM: East 7446400 North 3362600
 Latitude ° ' "N Longitude ° ' "W
 APPLICANT NAME AND TITLE: Mr. J. J. McKenna, Plant Manager
 APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, FL 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna Plant Manager
 Name and Title (Please Type)
 Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
 Name (Please Type)
THE CELOTEX CORPORATION
 Company Name (Please Type)
P. O. BOX 22602, TAMPA FL 33622
 Mailing Address (Please Type)

(Affix Seal)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871-4573

¹See 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.
Renewal of DER Permits No. A016-2608 and A016-17178. Wallboard dryer
is equipped with four burners (totaling 75.0 MM BTU/HR.). Primary fuel
is propane with 15% s #5 Fuel Oil as an alternate fuel. Wallboard Dryer
is in full compliance with all air pollution regulations.

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

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

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.
DER Permit No. A016-2608 Issued 9/21/76 Expires 8/31/80
DER Permit No. A016-17178 Issued 2/28/79 Expires 1/31/84

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: _____

G. 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?	<u>N/A</u>
a. If yes, has "offset" been applied?	<u>N/A</u>
b. If yes, has "Lowest Achievable Emission Rate" been applied?	<u>N/A</u>
c. If yes, list non-attainment pollutants.	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	<u>N/A</u>
3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII.	<u>N/A</u>
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	<u>N/A</u>
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	<u>N/A</u>

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Propane			3474	I
or				
#5 Fuel Oil	Sulphur	1.5	3933	I

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

1. Total Process Input Rate (lbs/hr): 100,674

2. Product Weight (lbs/hr): 97,200

C. Airborne Contaminants Emitted: 3,974

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
SOx	59.0	495.6	59.0	59.0	59.0	495.6	I
Note: The above emission rates apply only when wallboard kiln is fired on alternate fuel 1.5% sulphur #5 Fuel Oil							

D. Control Devices: (See Section V, Item 4) **None**

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. — 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Propane	0.0232	0.0298 MCFH	75.0
(Alternate) #5 Fuel Oil 1.5% S	9.6	12.3	75.0

*Units Natural Gas, MCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 1.5% max Percent Ash: less than 0.01%
 Density: 7.63 lbs/gal Typical Percent Nitrogen: less than 0.03%
 Heat Capacity: 19,069 BTU/lb 145,500 BTU/gal
 Other Fuel Contaminants (which may cause air pollution): None

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum _____

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

None

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

Stack Height: 3@ 30 ft. 1@ 50 ft. Stack Diameter: 3 ft ft.
 Gas Flow Rate: approx. 20,000- ACFM Gas Exit Temperature: 220-350° °F.
 Water Vapor Content: 5 to 20 25,000 % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day N/A days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration	
<i>N/A</i>		

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration	
<i>N/A</i>		

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- 1. Control Device/System:
- 2. Operating Principles:
- 3. Efficiency:*
- 4. Capital Costs:
- 5. Useful Life:
- 6. Operating Costs:
- 7. Energy:
- 8. Maintenance Cost:
- 9. Emissions:

Contaminant	Rate or Concentration	
<i>N/A</i>		

*Explain method of determining D 3 above.

10. Stack Parameters

- a. Height: *N/A* ft.
- b. Diameter: ft.
- c. Flow Rate: *N/A* ACFM
- d. Temperature: °F
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*: *N/A*
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space and operate within proposed levels:
- 4.

- a. Control Device
- b. Operating Principles:

- c. Efficiency*: N/A
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*: N/A
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

- a.
 - (1) Company:
 - (2) Mailing Address:
 - (3) City: (4) State:
 - (5) Environmental Manager:
 - (6) Telephone No.: N/A

*Explain method of determining efficiency above.

- (7) Emissions*:

Contaminant	Rate or Concentration

- (8) Process Rate*:

- b.
 - (1) Company: N/A
 - (2) Mailing Address:
 - (3) City: (4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

- (5) Environmental Manager:
- (6) Telephone No.:
- (7) Emissions*:

Contaminant	Rate or Concentration
N/A	N/A

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

N/A

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

N/A

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicant's Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

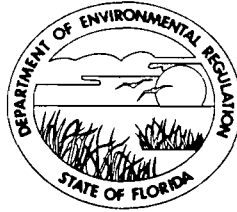
N/A

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ERNEST E. FREY
DISTRICT MANAGER

Permittee:	I.D. Number:	31-16-0202-(07,11,12)
The Celotex Corporation	Permit/Certification Number:	A016-107128
P. O. Box 40569	Date of Issue:	October 4, 1985
Jacksonville, Florida 32203	Expiration Date:	August 31, 1990
	County:	Duval
	Latitude/Longitude:	30:23:37/81:33:30
	UTM:	E-7446.430 N-3362.370
	Project:	3 Calcining Kettle Fireboxes

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

For operation of the three (3) calcining kettle fireboxes burning propane gas and/or No. 6 fuel oil for the calcination of gypsum ore. The calcining kettles shall be fired by Haucks Model 785 PM burners not to exceed a total heat input of 33×10^6 BTU/hr.

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
07	Calcining kettle firebox #1 (East)
11	" #2 (Center)
12	" #3 (West)

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Supporting documents shall be as follows:

1. Permit renewal application dated July 3, 1985
2. Permit A016-32635 and all attachments
3. Visible emissions test dated July 11, 1985
4. Celotex Particulate Matter Emissions Computer Modeling results dated August 10, 1982

BEST AVAILABLE COPY

PERMITTEE:

The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-(07,11,12)
A016-107128
October 4, 1985
August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

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

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

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

PERMITTEE:

The Celotex Corporation

I.D. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

31-16-0202-(07,11,12)

A016-107128

October 4, 1985

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:	I.D. Number:	31-16-0202-(07,11,12)
The Celotex Corporation	Permit/Certification Number:	A016-107128
	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
07	Particulates	Upon request
	Visible emissions	12 months
11	Particulates	Upon request
	Visible emissions	12 months
12	Particulates	Upon request
	Visible emissions	12 months

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
07	Particulates	17-2.650(2)(b)2.	2.207
	Visible emissions	17-2.610(2)(a)	2.203
11	Particulates	17-2.650(2)(b)2.	2.207
	Visible emissions	17-2.610(2)(a)	2.203
12	Particulates	17-2.650(2)(b)2.	2.207
	Visible emissions	17-2.610(2)(a)	2.203

Permittee:
The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-(07,11,12)
A016-107128
October 4, 1985
August 31, 1990

8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>% OPACITY</u>
07	Particulates	1.1	4.8		
	Visible emissions				20%
11	Particulates	1.1	4.8		
	Visible emissions				20%
12	Particulates	1.1	4.8		
	Visible emissions				20%

9. Operation shall be limited to 8760 hours per year.

10. Testing shall be in accordance with EPA Reference Method No. 5 for particulates.

11. Testing shall be in accordance with EPA Reference Method No. 9 for the visual determination of opacity.


12. The No. 6 fuel oil shall be limited to a maximum sulfur content of 1.5% by weight. Sulfur analysis of the No. 6 fuel oil shall be done in accordance with ASTM D 2622-82 (sulfur in petroleum products - X-RAY Spectrographic Method) or other method approved in advance by BESD. Analysis shall be submitted to BESD upon request.

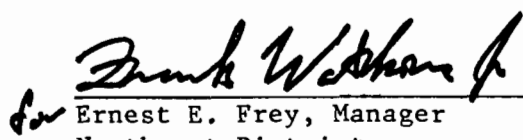
13. The process weight shall be limited to 66,000 pounds per hour of gypsum ore.

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation


Donald C. Bayly, Division Chief

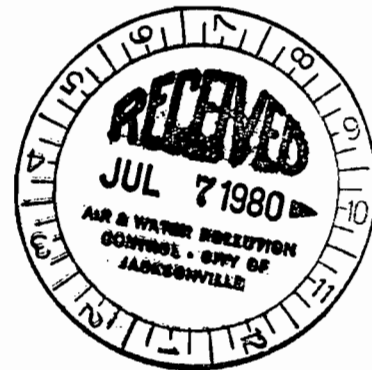

for Ernest E. Frey, Manager
Northeast District

¹FAC---Florida Administrative Code

²JEPB--Jacksonville Environmental Protection Board

5 Pages Attached Page 5 of 5

DER FORM 17-1.201(5) Effective November 30, 1982



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

SOURCE TYPE: Air Pollution [] New¹ Existing¹
 APPLICATION TYPE: [] Construction Operation [] Modification
 COMPANY NAME: The Celotex Corporation COUNTY: Duval

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) Three Calcining Kettles - 1.5% Sul. #5 Oil - Alternate fuel: Propane

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville
 UTM: East 7446400 North 3362600
 Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Mr. J.J. McKenna, Plant Manager
 APPLICANT ADDRESS: (9225 Dames Point Road, Jacksonville, FL 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna, Plant Manager
 Name and Title (Please Type)
 Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
 Name (Please Type)

(Affix Seal)

THE CELOTEX CORPORATION
 Company Name (Please Type)
P. O. BOX 22602, TAMPA, FL 33622
 Mailing Address (Please Type)

Florida Registration No. 25950 Date: July 2, 1980 Telephone No. 813-871 4573

¹See 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.

- 1) Renewal of DER Permit No. A016-2607.
- 2) Proposed renewal of permit will comply - kettle burners are fired on 1.5% sulphur #5 fuel oil and propane is available as an alternate fuel.

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

Start of Construction N/A Completion of Construction N/A

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

N/A

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

DER Permit No. A016-2607 Issued 9/21/76 Expires 8/31/80.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr _____ ; if seasonal, describe: _____

G. 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? N/A
 - a. If yes, has "offset" been applied? N/A
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A
 - c. If yes, list non-attainment pollutants. _____
- 2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. N/A
- 3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. N/A
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A
- 5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
#5 Fuel Oil 1.5% Sul.	3.68	5.4	33.0
or (Alternate Fuel) Propane	0.0089	0.013	33.0

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 1.5 Percent Ash: less than 0.01%
 Density: 7.63 lbs/gal Typical Percent Nitrogen: less than 0.03%
 Heat Capacity: 19.069 BTU/lb 145,500 BTU/gal
 Other Fuel Contaminants (which may cause air pollution): NONE

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum N/A

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

None

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

Stack Height: 75 ft. Stack Diameter: 3.0 ft.
 Gas Flow Rate: approx. 7.000 ACFM Gas Exit Temperature: 850-950 °F.
 Water Vapor Content: less than 5 % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated	n/a	N/A	N/A	N/A	N/A	N/A	N/A

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day N/A days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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		
#5 Fuel Oil	Sulphur	1.5		E

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

- Total Process Input Rate (lbs/hr): 66,000
- Product Weight (lbs/hr): 64,269.5

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
SO ₂	51.9	218.1	51.9	51.9	51.9	218.1	E

D. Control Devices: (See Section V, Item 4) **NONE**

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

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

Brief description of operating characteristics of control devices: _____

 N/A

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

 N/A

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration
N/A	

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration
N/A	

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
N/A	

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration
N/A	

*Explain method of determining D 3 above.

10. Stack Parameters

- a. Height: *N/A* ft. b. Diameter: ft.
c. Flow Rate: *N/A* ACFM d. Temperature: °F
e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
b. Operating Principles:
c. Efficiency*: *N/A* d. Capital Cost:
e. Useful Life: f. Operating Cost:
g. Energy*: h. Maintenance Cost:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
b. Operating Principles: *N/A*
c. Efficiency*: d. Capital Cost:
e. Useful Life: f. Operating Cost:
g. Energy**: h. Maintenance Costs:
i. Availability of construction materials and process chemicals:
j. Applicability to manufacturing processes:
k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
b. Operating Principles: *N/A*
c. Efficiency*: d. Capital Cost:
e. Life: f. Operating Cost:
g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space and operate within proposed levels:
- 4.
- a. Control Device
 - b. Operating Principles:
 - c. Efficiency*: N/A
 - d. Capital Cost:
 - e. Life:
 - f. Operating Cost:
 - g. Energy:
 - h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*: N/A
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address: N/A
- (3) City: N/A
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration
N/A	

(8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
NA	NA

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO²* _____ Wind spd/dir
Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

N/A

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

N/A

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

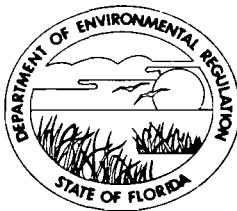
N/A

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER

Permittee:	I.D. Number:	31-16-0202-05
The Celotex Corporation	Permit/Certification Number:	A016-107097
P. O. Box 40569	Date of Issue:	October 4, 1985
Jacksonville, Florida 32203	Expiration Date:	August 31, 1990
	County:	Duval
	Latitude/Longitude:	30:23:37/81:33:30
	UTM:	E-7446.431 N-3362.370
	Project:	Wallboard End Trim System

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

For operation of the wallboard end trim cutters. Particulate emissions from this operation shall be controlled by venting to a 10,000 CFM FlexKleen Model UDC-120L dust collector identified as the No. 6 baghouse when the Board Plant is on line and the remainder of the facility is shut down. Otherwise, particulate emissions shall be controlled by venting to the Cottrell Electrostatic Precipitator (APIS No. 31-16-0202-03).

Emission points shall be as follows:

<u>Point</u>	<u>Source</u>
05	Wallboard end trim cutters

Located at 9225 Dames Point Road, Jacksonville, Florida 32226

Supporting documents shall be as follows:

- (1) Permit renewal application dated July 3, 1985
- (2) Permit A016-32632 and all attachments
- (3) Visible emissions test dated July 11, 1985
- (4) Celotex Particulate Matter Emissions computer modeling results dated August 10, 1982

RULES OF THE ADMINISTRATION COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTEREST

PART II
FORMAL PROCEEDINGS

28-5.201 Initiation of Formal Proceedings.

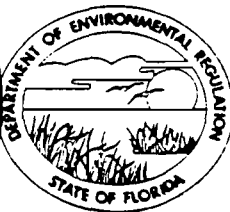
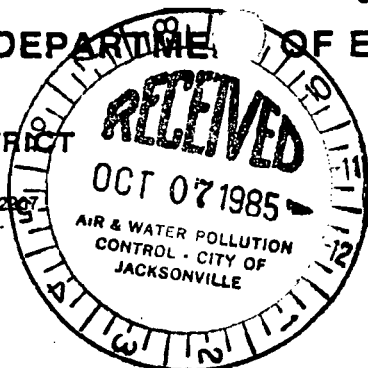
- (1) Initiation of formal proceedings shall be made by petition to the agency responsible for rendering final agency action. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be indented.
- (2) All petitions filed under these rules should contain:
 - (a) The name and address of each agency affected and each agency's file or identification number, if known;
 - (b) The name and address of the petitioner or petitioners, and an explanation of how his/her substantial interests will be affected by the agency determination;
 - (c) A statement of when and how petitioner received notice of the agency decision or intent to render a decision;
 - (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
 - (e) A concise statement of the ultimate facts alleged, as the rules and statutes which entitle the petitioner to relief;
 - (f) A demand for relief to which the petitioner deems himself entitled; and
 - (g) Other information which the petition contends is material.

A petition may be denied if the petitioner does not state adequately a material factual allegation, such as substantial interest in the agency determination, or if the petition is untimely. (Section 28-5.201(3)(a), FAC)

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959



*memo
Woodley
summers*

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

October 4, 1985

Mr. Laurence M. Hickey
Plant Manager
The Celotex Corporation
Post Office Box 40569
Jacksonville, FL 32203

Dear Mr. Hickey:

Duval County - AP
The Celotex Corporation
Wallboard End Trim System

Attached is Permit No. A016-107097. Should you object to the issuance of this permit or the specific conditions of the permit, you have a right to petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes.

The petition must be filed within fourteen (14) days from receipt of this letter. The petition must comply with the requirements of Section 17-103.155 and Rule 28-5.201, Florida Administrative Code, (copies attached) and be filed pursuant to Rule 17-103.155(1) in the Office of General Counsel of the Department of Environmental Regulation at 2600 Blair Stone Road, Tallahassee, Florida 32301. Petitions which are not filed in accordance with the above provisions are subject to dismissal by the Department.

In the event a formal hearing is conducted pursuant to Section 120.57(1), all parties shall have an opportunity to respond, to present evidence and argument on all issues involved, to conduct cross-examination of witnesses and submit rebuttal evidence, to submit proposed findings of facts and orders, to file exceptions to any order or hearing officer's recommended order, and to be represented by counsel.

If an informal hearing is requested, the agency, in accordance with its rules of procedure, will provide affected persons or parties or their counsel an opportunity, at a convenient time and place, to present to the agency or hearing officer, written or oral evidence in opposition to the agency's action or refusal to act, or a written statement challenging the grounds upon which the agency has chosen to justify its action or inaction, pursuant to Section 120.57(2), Florida Statutes.

Sincerely,
Frank Watkins Jr
Frank Watkins, Jr., P.E.
District Engineer

FW:vk

cc: ✓ Jacksonville BES

BEST AVAILABLE COPY

PERMITTEE:

The Celotex Corporation

I.D. Number:

1-16-0202-05

Permit/Certification Number: A016-107097

Date of Issue:

October 4, 1985

Expiration Date:

August 31, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

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

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

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

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

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

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

PERMITTEE:

The Celotex Corporation

I.D. Number:

31-16-0202-05

Permit/Certification Number:

A016-107097

Date of Issue:

October 4, 1985

Expiration Date:

August 31, 1990

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.
10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
13. This permit also constitutes:
 - () Determination of Best Available Control Technology (BACT)
 - () Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
 - () Compliance with New Source Performance Standards
14. The permittee shall comply with the following monitoring and record keeping requirements:
 - a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
 - b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
 - c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

Permittee:	I.D. Number:	31-16-0202-05
The Celotex Corporation	Permit/Certification Number:	A016-107097
	Date of Issue:	October 4, 1985
	Expiration Date:	August 31, 1990

SPECIFIC CONDITIONS:

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days after completion of testing.
2. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
3. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
4. Control equipment shall be provided with a method of access that is safe and reasonably accessible. Stack sampling ports and/or platforms shall not be required.
5. Permittee shall submit an annual operation report to BESD for this source on the form supplied for each calendar year on or before March 1.
6. The following pollutant(s) shall be tested at intervals indicated from the date of July 1, 1985.

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>INTERVAL</u>
05	Particulates	Upon request
	Visible Emissions	12 months

7. The applicable emission limiting rules shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>1FAC</u>	<u>2JEPB</u>
05	Particulates	17-2.650(2)(b)2	2.207
	Visible Emissions	17-2.700(3)(d)	2.501

Permittee:
The Celotex Corporation

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

31-16-0202-05
A016-107097
October 4, 1985
August 31, 1990

8. The allowable emissions shall be as follows:

<u>PT. NO.</u>	<u>POLLUTANT</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>OTHER</u>	<u>OPACITY</u>
05	Particulates Visible Emissions	5	21.9		5% continuous

9. Operation shall be limited to 8760 hours per year.


10. Testing shall be in accordance with EPA Reference Method No. 5 for particulates.


11. Testing shall be in accordance with EPA Reference Method No. 9 for the visual determination of opacity.

Issued this 4th day of October, 1985

City of Jacksonville
Bio-Environmental Services Division

State of Florida
Department of Environmental Regulation


Donald C. Bayly, Division Chief


for Ernest E. Frey, Manager
Northeast District

¹FAC---Florida Administrative Code

²JEPB--Jacksonville Environmental Protection Board

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PERMITTEE:

the Celotex Corporation

I.D. Number: 31-16-0202-05
Permit/Certification Number: A016-107097
Date of Issue: October 4, 1985
Expiration Date: August 31, 1990

This is to certify that this document was mailed to the applicant, interested parties or their attorneys and persons who have requested in writing notice of the agency's action or proposed action before the close of business on the date indicated below:

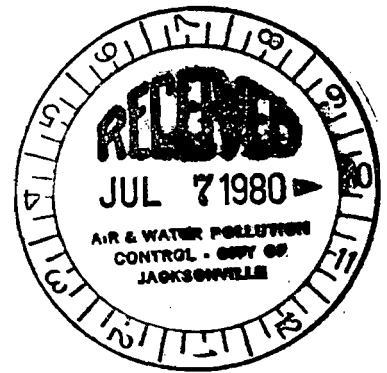
Date: 10/4/85

Frank Wathams Jr.
Signature

FILED AND ACKNOWLEDGMENT UNIT
Filed on this date, pursuant to 37 C.F.R. 1.101, with
Signatures with the designated Clerks of the
records of which is hereby acknowledged.

[Signature] 10/4/85
Clerk

Permit No. A016-32632
DATE 11/25/80



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

SOURCE TYPE: Air Pollution New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification
COMPANY NAME: The Celotex Corporation COUNTY: Duval
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) #6 Baghouse
SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville
UTM: East 7446400 North 3362600
Latitude ° ' "N Longitude ° ' "W
APPLICANT NAME AND TITLE: Mr. J. J. McKenna, Plant Manager
APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, Florida 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna, Plant Manager
Name and Title (Please Type)
Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
Name (Please Type)
THE CELOTEX CORPORATION
Company Name (Please Type)
P. O. BOX 22602, TAMPA, FL 33622
Mailing Address (Please Type)
Date: July 2, 1980 Telephone No. 813-871-4573

(Affix Seal)

Florida Registration No. 25950

¹See 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.

#6 Baghouse is used to collect gypsum end trim material.
Collected end trim is returned to the board manufacturing system.
Dust loading to the collector is approximately 12,000 lbs./day.
Collection efficiency is rated at 99.8%.

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

Start of Construction N/A Completion of Construction _____

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

 N/A

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

DER Permit No. A016-2602. Issued 9/21/76. Expires 8/31/80.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? _____ Yes No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52*; if power plant, hrs/yr _____;

if seasonal, describe: _____
* 8400 hrs/yr used in calculations
is 24 x 7 x 50

G. 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? N/A
a. If yes, has "offset" been applied? N/A
b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A
c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. N/A

3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. N/A

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? N/A

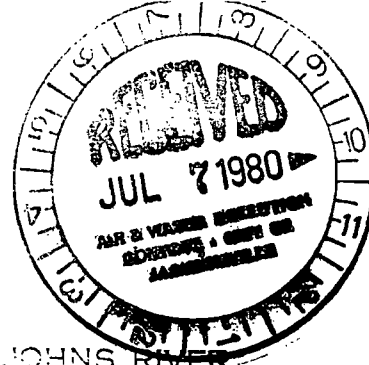
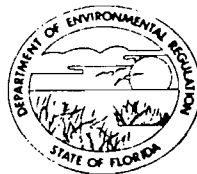
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? N/A

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

PERMITTED

BY

LOWER ST. JOHNS RIVER SUB DISTRICT
DEPARTMENT OF ENVIRONMENTAL REGULATION



PERMIT NO. 4016-32632

DATE 4/25/80

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT ST. JOHNS RIVER
AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution [] New¹ [X] Existing¹

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

COMPANY NAME: The Celotex Corporation

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) #6 Baghouse

SOURCE LOCATION: Street 9225 Dames Point Road City Jacksonville

UTM: East 7446400 North 3362600

Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Mr. J. J. McKenna, Plant Manager

APPLICANT ADDRESS: 9225 Dames Point Road, Jacksonville, Florida 32226

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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

*Attach letter of authorization

Signed: [Signature]
J. J. McKenna, Plant Manager
Name and Title (Please Type)

Date: 6/27/80 Telephone No. 904-751-4400

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. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: [Signature]
EDUARDO CARDONA
Name (Please Type)

THE CELOTEX CORPORATION
Company Name (Please Type)

P. O. BOX 22602, TAMPA, FL 33622
Mailing Address (Please Type)

Date: July 2, 1980 Telephone No. 813-871-4573

(Affix Seal)

Florida Registration No. 25950

¹See 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.

#6 Baghouse is used to collect gypsum end trim material.
Collected end trim is returned to the board manufacturing system.
Dust loading to the collector is approximately 12,000 lbs./day.
Collection efficiency is rated at 99.8%.

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

Start of Construction N/A Completion of Construction _____

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

N/A

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

DER Permit No. A016-2602. Issued 9/21/76. Expires 8/31/80.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? Yes No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr _____ ;
 if seasonal, describe: _____

G. 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?

N/A

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

N/A

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

N/A

c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.

N/A

3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII.

N/A

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?

N/A

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?

N/A

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

E. Fuels

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

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: N/A Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

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

Collected gypsum dust is returned to process and is used as an accelerator in the gypsum board manufacturing process.

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

Stack Height: 60 ft. Stack Diameter: Rectangular 2.2 sq. ft.

Gas Flow Rate: 10,000 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: Less than 2 % Velocity: 75.7 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated	N/A	N/A	N/A	N/A			

Description of Waste N/A

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

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		
Gypsum Dust	Gyp. Dust	0.1745	500	G

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

1. Total Process Input Rate (lbs/hr): 67,100
 2. Product Weight (lbs/hr): 66,600

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission ¹		Allowed Emission ² Rate per Ch. 17-2, F.A.C.	Allowable ³ Emission lbs/hr	Potential Emission ⁴		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Gypsum Dust	1.0	4.2	No visible emissions	500	2100	G	
		(4.37) @ 87% EPB			(2184) @ 87% EPB		

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)
FlexKleen Baghouse Model UDC-120L	Gypsum Dust	99.8%	+5 microns	Design data

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

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

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

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

Type of pollution control 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.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight – show derivation.
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, 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 8½" 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 8½" 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 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
 Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) Yes No

Contaminant	Rate or Concentration		
N/A			

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 9. Emissions: | |

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

- a. Height: ft.
- b. Diameter: ft.
- c. Flow Rate: ACFM
- d. Temperature: °F
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy*:
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy**:
- h. Maintenance Costs:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

N/A

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

*Explain method of determining efficiency above.

- i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space and operate within proposed levels:
- 4.
- a. Control Device
 - b. Operating Principles:
 - c. Efficiency*:
 - d. Capital Cost:
 - e. Life:
 - f. Operating Cost:
 - g. Energy:
 - h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

N/A

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

(8) Process Rate*:

10. Reason for selection and description of systems:

N/A

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO²* _____ Wind spd/dir
 Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

- a) Was instrumentation EPA referenced or its equivalent? Yes No
- b) Was instrumentation calibrated in accordance with Department procedures? Yes No Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

- 1. _____ Modified? If yes, attach description.
- 2. _____ Modified? If yes, attach description.
- 3. _____ Modified? If yes, attach description.
- 4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Jim Walter corporation

POST OFFICE BOX 31075 (33631-3075) · 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

September 4, 1990

Mr. Clair Fancy, P.E.
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

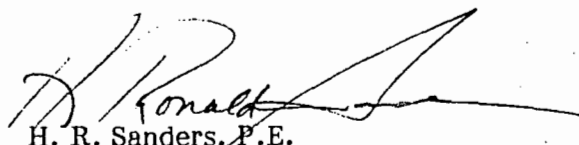
Subject: The Celotex Corporation
Jacksonville, FL
Application to Construct Air Pollution Sources

Dear Mr. Fancy:

Enclosed is an original and one copy of the subject application. Also enclosed is Celotex's check for \$500.00 for the application fee.

I would like to suggest a meeting with you in Tallahassee on September 18 to discuss any questions you may have. I will be happy to meet with you at any time after 10:30 a.m. If the 18th is inconvenient for you, please recommend another date. I may be contacted at 813/873-4351.

Sincerely,


H. R. Sanders, P.E.
Senior Environmental Engineer

cc: R. E. Kipper
A. H. Elwell

Enc.

THE CELOTEX CORPORATION

JACKSONVILLE, FLORIDA

APPLICATION TO CONSTRUCT AIR
POLLUTION SOURCES

By-Product Gypsum Handling
and Drying System

September 1990

Prepared by:
H. R. Sanders
Jim Walter Corporation
Tampa, Florida

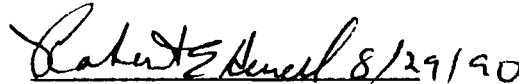
Authorization

Jim Walter corporation

POST OFFICE BOX 31075 (33631-3075) · 4010 BOY SCOUT BOULEVARD (33607)
TAMPA, FLORIDA

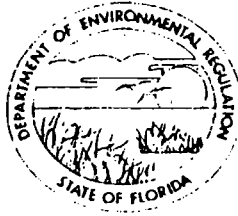
August 29, 1990

Notice is hereby given that Alan H. Elwell, Plant Manager, The Celotex Corporation, Dames Point Road, Jacksonville, Duval County, Florida is the authorized representative for The Celotex Corporation at the Jacksonville facility and has full signatory authority for environmental matters.


Robert E. Herrell Date
Vice President-Manufacturing
Building Products Division

Application

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200



\$500 pd.
9-6-90

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ERNEST E. FREY
DISTRICT MANAGER
GARY L. SHAFFER
ASSISTANT DISTRICT MANAGER

AC 10-186133

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Process [X] New¹ [] Existing¹

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

COMPANY NAME: The Celotex Corporation COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) By-Product Gypsum Processing

SOURCE LOCATION: Street Dames Point Road City Jacksonville

UTM: East 7446.430 North 3362.370

Latitude 30° 23' 37"N Longitude 81° 33' 30"W

APPLICANT NAME AND TITLE: Alan H. Elwell, Plant Manager

APPLICANT ADDRESS: P.O.Box 28830; Jacksonville, FL 32218

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Celotex Corporation

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: Alan H. Elwell

Alan H. Elwell - Plant Manager
Name and Title (Please Type)

Date: 8/31/90 Telephone No. 904/751-4400

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

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

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

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

Signed H. R. Sanders

H. R. Sanders

Name (Please Type)

Jim Walter Corporation

Company Name (Please Type)

4010 Boy Scout Blvd.; Tampa, FL 33607-5750

Mailing Address (Please Type)

Florida Registration No. PE0035237 Date: 8/28/90 Telephone No. 813/873-4351

SECTION II: GENERAL PROJECT INFORMATION

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

See Attachment A

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

Start of Construction 12-3-90 Completion of Construction 7-1-91

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.)

Baghouse and associated equipment - \$200,000

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

N/A

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

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

- 1. Is this source in a non-attainment area for a particular pollutant? No
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
- 2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No
- 3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? 40CFR PART 60, SUBPART 000 Yes
- 5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? No
- 6. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? Yes
 - a. If yes, for what pollutants? Particulates
 - 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.

See Attachment B.

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		
By-Product Gypsum	None	-	65,800 (wet)	A
Reclaimed Gypsum	None	-	14,200 (wet)	B
* Natural Gas	None	-	28,990 Ft ³ /hr	G
* No. 6 Fuel Oil	Sulfur	1.45	1602	G
* Propane	None	-	11,970 Ft ³ /hr	G

*Fuels are direct fired. Only one fuel will be used at any one time.

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

- Total Process Input Rate (lbs/hr): 81,602 (wet)
- Product Weight (lbs/hr): 66,000 (Dry)

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

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual I/yr			lbs/hr	I/yr	
PM	3.24 ✓	14.2	40 CFR Part 17-2.600 Subpart 000	3.79	663.5	2906	F
SO _x	46.3 ✓	39.9 ✓	N/A	N/A	46.3	39.9	F
No _x	11.0	48.4	N/A	N/A	11.0	48.4	F
CO	1.0	4.4	N/A	N/A	1.0	4.4	F
VOC	0.23	1.0	N/A	N/A	0.23	1.0	F

¹See Section V, Item 2.

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

³Calculated from operating rate and applicable standard.

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

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

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 Industries, Inc. Baghouse, Model NW-510-120 (or equivalent)	PM	99.5	N/A	Mfg. guarantee

E. Fuels

Type (Be Specific)*	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.019	0.029	30.0
No. 6 Fuel Oil	133.8	200.7	30.0
Propane	0.008	0.012	30.0
*Not fired in combination.			

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

Fuel Analysis: See Attachment C.

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average _____ Maximum _____

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

All material is recovered as product or reprocessed in a closed cycle system.

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

Stack Height: 73 ft. Stack Diameter: 3.0 ft.
 Gas Flow Rate: 30,000 ACFM 18,892 DSCFM Gas Exit Temperature: 170 °F.
 Water Vapor Content: 24.9 % Velocity: 70.7 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

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

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

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

Manufacturer _____

Date Constructed _____ Model No. _____

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

Stack Height: _____ ft. Stack 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: _____

N/A

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

N/A

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

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. Figure 1.
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. Figure 2.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
- Yes No

Contaminant	Rate or Concentration

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)
- Yes No

Contaminant	Rate or Concentration

- C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

- D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: _____ ft. b. Diameter: _____ ft.
- c. Flow Rate: _____ ACFM d. Temperature: _____ °F.
- e. Velocity: _____ FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device: _____ b. Operating Principles: _____
- c. Efficiency:¹ _____ d. Capital Cost: _____
- e. Useful Life: _____ f. Operating Cost: _____
- g. Energy:² _____ h. Maintenance Cost: _____
- i. Availability of construction materials and process chemicals: _____
- j. Applicability to manufacturing processes: _____
- k. Ability to construct with control device, install in available space, and operate within proposed levels: _____

2.

- a. Control Device: _____ b. Operating Principles: _____
- c. Efficiency:¹ _____ d. Capital Cost: _____
- e. Useful Life: _____ f. Operating Cost: _____
- g. Energy:² _____ h. Maintenance Cost: _____
- i. Availability of construction materials and process chemicals: _____

¹Explain method of determining efficiency.

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DEYERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO²* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? Yes No
- b. Was instrumentation calibrated in accordance with Department procedures?
 Yes No Unknown

B. Meteorological Data Used for Air Quality Modeling

- 1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year
- 2. Surface data obtained from (location) _____
- 3. Upper air (mixing height) data obtained from (location) _____
- 4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

- 1. _____ Modified? If yes, attach description.
- 2. _____ Modified? If yes, attach description.
- 3. _____ Modified? If yes, attach description.
- 4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

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

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Sect. V - Supplement

THE CELOTEX CORPORATION
JACKSONVILLE, FLORIDA

Application to Construct a By Product
Gypsum Handling and Drying System

SECTION V: SUPPLEMENTAL REQUIREMENTS

1. Raw Materials

- a. By-Product Gypsum - 28 dry tons/hour (Design) @ 15% Moisture

$$\frac{288}{.85} = \frac{32.9 \text{ wet tons/hour}}{}$$
$$= \frac{65,800 \text{ wet lb/hour}}{}$$

- b. Reclaim Gypsum - 5 dry tons/hour (Design) @ 30% Moisture

$$\frac{5}{0.7} = \frac{7.1 \text{ wet tons/hour}}{}$$
$$= \frac{14,200 \text{ wet lb/hour}}{}$$

- c. Fuel Oil (No. 6)

$$\frac{30.0 \times 10^6 \text{ Btuh}}{1.49506 \times 10^5 \text{ Btu/gal}} \times 7.984 \frac{\text{lb}}{\text{gal}} = \frac{1602 \text{ lb/hour}}{}$$

200.7 gal/hr

- d. Natural Gas

$$\frac{30.0 \times 10^6 \text{ Btuh}}{1.035 \times 10^3 \text{ Btuh/ft}^3} = 28.99 \times 10^3 \text{ ft}^3/\text{hour}$$
$$= \frac{28,990 \text{ ft}^3/\text{hour}}{}$$

- e. Propane

$$\frac{30.0 \times 10^6 \text{ Btuh}}{2.507 \times 10^3 \text{ Btuh/ft}^3} = 11.97 \times 10^3 \text{ ft}^3/\text{hour}$$
$$= \frac{11,970 \text{ ft}^3/\text{hour}}{}$$

Total Process Input

By-Product Gypsum	=	65,800 lb/hr	
Reclaim Gypsum	=	14,200 lb/hr	
Fuel Oil	=	<u>1,602 lb/hr</u>	<i>~ 200.7 gal/hr</i>
Total	=	<u>81,602 lb/hr</u>	

Product

Equal Dry Weight of Gypsum = 33 tons/hour
 = 66,000 lb/hour

2. Basis of Emission Estimates

a. Particulate Matter (Baghouse Stack)

Allowable Emission Rate = 0.02 gr/dscf

Qs = 19,417 dscfm

$$\frac{0.02 \text{ gr/dscf} \times 18,892 \text{ dscfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = \underline{3.24 \text{ lb/hr}}$$

$$\frac{3.24 \text{ lb/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{14.2 \text{ tons/yr}}$$

Due to the high moisture content of the gypsum prior to the dryer, no emissions are expected from the handling operations.

Any other fugitive emissions?

Is this true

*What is the turn around
How long are they going*

b. Sulfur Dioxide

(1) No SO₂ from BPG & Reclaim

(2) Fuel Oil S = 1.45%, by weight

$$\text{AP-42 Factor} = 157 \text{ S lb}/10^3 \text{ gal} - \text{SO}_2$$

F.A.C. Title 17, Chap. 17-2, Table 500-2
 Significant Emission Rate, SO₂ = 40 TPY

$$\text{Limit SO}_2 \text{ Emission} = \underline{39.9 \text{ TPY}}$$

$$\frac{39.9 \text{ tons/yr} \times 2000 \text{ lb/ton}}{157 (1.45) \text{ lb}/10^3 \text{ gal}} = \underline{350,538 \text{ gal, oil/yr}}$$

(3) N.G.

$$\text{AP-42 Factor} = 0.6 \text{ lb}/10^6 \text{ ft}^3$$

$$0.6 \text{ lb}/10^6 \text{ ft}^3 \times 0.029 \text{ } 10^6 \text{ ft}^3/\text{hr} = \underline{0.017 \text{ lb/hr}}$$

$$\frac{350,538 \text{ gal/yr}}{200.7 \text{ gal/hr}} = 1746.6 \text{ hr/yr Fuel Oil}$$

from permit application, P.5, max. oil/hr

$$.017 \text{ lb/hr} \times \frac{(8760 - 1746.6) \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{0.06 \text{ TPY}}$$

oil avg/hr is 133.8 lb/hr

(4) Propane

$$\text{AP-42 Factor} = 0.6 \text{ lb}/10^6\text{ft}^3$$

$$0.6 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ ft}^3/\text{hr} = \underline{0.007 \text{ lb/hr}}$$

- (5) Only one fuel is used at any one time. Maximum fuel oil usage will be limited to 350,538 gal/hr. The remaining energy requirement will be made up with natural gas.
Total SO₂ = 39.96 TPY.

c. Nitrogen Oxides

- (1) No NO_x from BPG or Reclaim

(2) Fuel Oil

$$\text{AP-42 Factor} = 55 \text{ lb}/10^3\text{gal}$$

$$55 \text{ lb}/10^3\text{gal} \times 0.2007 \frac{10^3\text{gal}}{\text{hr}} = \underline{11.04 \text{ lb/hr}}$$

$$\frac{55 \text{ lb}/10^3\text{gal} \times 350.5 \text{ } 10^3\text{gal/yr}}{2000 \text{ lb/ton}} = \underline{9.6 \text{ TPY}}$$

*48.4 if oil
used all
8760 hrs*

(3) N.G.

$$\text{AP-42 Factor} = 100 \text{ lb}/10^6\text{ft}^3$$

$$100 \text{ lb}/10^6\text{ft}^3 \times 0.029 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{2.9 \text{ lb/hr}}$$

$$\frac{2.9 \text{ lb/hr} \times 7013.4 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{10.2 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 100 \text{ lb}/10^6\text{ft}^3$$

$$100 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{1.2 \text{ lb/hr}}$$

- (5) Only one fuel is fired at any one time. Maximum fuel oil usage will be limited to 350,538 gal/yr. The remainder will be made up with natural gas. Total NO_x = 19.8 TPY.

d. Carbon Monoxide

- (1) BPG & Reclaim do not release CO.

d. Carbon Monoxide (cont'd)

(2) Fuel Oil

$$\text{AP-42 Factor} = 5 \text{ lb}/10^3\text{gal}$$

$$5 \text{ lb}/10^3\text{gal} \times .2007 \text{ } 10^3\text{gal}/\text{hr} = \underline{1.0 \text{ lb}/\text{hr}}$$

$$\frac{5 \text{ lb}/10^3\text{gal} \times 350.5 \text{ } 10^3\text{gal}/\text{yr}}{2000 \text{ lb}/\text{ton}} = \underline{0.9 \text{ TPY}}$$

(3) N.G.

$$\text{AP-42 Factor} = 20 \text{ lb}/10^6\text{ft}^3$$

$$20 \text{ lb}/10^6\text{ft}^3 \times 0.029 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{0.58 \text{ lb}/\text{hr}}$$

$$\frac{0.58 \text{ lb}/\text{hr} \times 7013.4 \text{ hr}/\text{yr}}{2000 \text{ lb}/\text{ton}} = \underline{2.0 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 20 \text{ lb}/10^6\text{ft}^3$$

$$20 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{0.24 \text{ lb}/\text{hr}}$$

- (5) Only one fuel is used at any one time. Maximum fuel oil usage will be limited to 350,538 gal/yr. The remainder will be made up with natural gas. Total CO = 2.9 TPY.

e. Volatile Organic Compounds

- (1) BPG & Reclaim do not release VOC.

(2) Fuel Oil

$$\text{AP-42 Factor} = 1.13 \text{ lb}/10^3\text{gal}$$

$$1.13 \text{ lb}/10^3\text{gal} \times 0.2007 \text{ } 10^3\text{gal}/\text{hr} = \underline{0.23 \text{ lb}/\text{hr}}$$

$$\frac{1.13 \text{ lb}/10^3\text{gal} \times 350.5 \text{ } 10^3\text{gal}/\text{yr}}{2000 \text{ lb}/\text{ton}} = \underline{0.2 \text{ TPY}}$$

(3) N.G.

$$\text{AP-42 Factor} = 5.3 \text{ lb}/10^6\text{ft}^3$$

$$5.3 \text{ lb}/10^6\text{ft}^3 \times 0.029 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{0.15 \text{ lb}/\text{hr}}$$

$$\frac{0.15 \text{ lb}/\text{hr} \times 7013.4 \text{ hr}/\text{yr}}{2000 \text{ lb}/\text{ton}} = \underline{0.5 \text{ TPY}}$$

(4) Propane

$$\text{AP-42 Factor} = 5.3 \text{ lb}/10^6\text{ft}^3$$

$$5.3 \text{ lb}/10^6\text{ft}^3 \times 0.012 \text{ } 10^6\text{ft}^3/\text{hr} = \underline{0.06 \text{ lb/hr}}$$

- (5) Only one fuel will be used at any one time. Maximum fuel oil useage will be limited to 350,538 gal/yr. The remainder will be made up with natural gas. Total VOC = 0.7 TPY.

3. Basis for Potential Emissions

a. Particulate Matter

Sources of particulate matter emissions are BPG, Reclaim and Fuel Oil. Particulate matter after passing through the dryer enters a cyclone which recovers the dried gypsum from the conveying air stream. It is estimated that the cyclone will recover 99% of the dried gypsum. Particulate from combustion of fuel oil is assumed to pass through to the baghouse.

PM From Fuel Oil (S = 1.45%)

$$\text{AP-42 Factor} = [10S + 3] \text{ lb}/10^3\text{gal}$$

$$[10(1.45)+3]\text{lb}/10^3\text{gal} \times 0.2007 \text{ } 10^3\text{gal} = \underline{3.51 \text{ lb/hr}}$$

$$\text{Dry Gypsum} = 33 \text{ tons/hr} = 66,000 \text{ lb/hr}$$

$$66,000 \text{ lb/hr} \times 0.01 = \underline{660 \text{ lb/hr}}$$

$$\underline{\text{PM Potential Uncontrolled Emissions}} = 660 + 3.51 = \underline{663.51 \text{ lb/hr}}$$

$$663.51 \text{ lb/hr} \times \frac{8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{2906 \text{ tons/yr}}$$

b. SO_x, NO_x, CO, VOC

No controls are planned. Potential uncontrolled emissions are the same as emissions.

4. Control System Details

a. Baghouse

b. Ultra Industries, Inc. (or equivalent)

Model NW-510-120

- c. Bags: 520, 16 oz. polyester felt, 5-3/4" D X 10' L
- d. Cleaning Mechanism: Reverse jet
- e. A/C Ratio: 3.84/1

5. Control System Efficiency

From 3. above

Uncontrolled Particulate Emission Rate = 663.51 lb/hr

From 2. above

Particulate emissions = 3.24 lb/hr (based on mfg. guarantee of 0.02 grains/dscf)

Required Efficiency

$$\frac{[663.51 \text{ lb/hr} - 3.24 \text{ lb/hr}]}{663.51 \text{ lb/hr}} \times 100\% = \underline{\underline{99.5\%}}$$

Attachments

Radio includes NESHAP?
No.

Attachment A

The Celotex Corporation

Jacksonville, Florida

It is proposed to construct a system to handle, grind and dry a blend of by-product gypsum (BPG) and reclaimed gypsum board (in-plant recycle only).

BPG will be received by truck from Jacksonville Electric Authority and stockpiled onsite. The BPG will be introduced into the system via a hopper feeding a belt conveyor transfer system. Reclaim gypsum from onsite stockpiles will be added to the BPG on the conveyor belt. An existing hopper and conveyor will handle the reclaim gypsum. The combined BPG and reclaim gypsum (BPG mixture) will be transferred to the crushing and drying equipment. Due to the moisture level of the as received BPG (approximately 15%) and reclaim gypsum (approximately 30%), no emission control equipment is planned for in the delivery and transfer operations. *But there are emissions*

After transfer, the BPG mixture will be ground, size classified and dried in a closed system. The mixture will be air conveyed through the process. Initial separation of the conveying air and dry BPG mixture is by a cyclone separator which will function as part of the process equipment. The exhaust from the cyclone will pass through a baghouse for removal of the remaining fine dust. Air from the baghouse will be exhausted to atmosphere. Dust discharged from the baghouse hopper will be mixed with the gypsum from the cyclone and screw conveyed to existing holding bins for further processing through existing equipment.

A schematic of the proposed system is shown on Figure 1.

Justification for Non-NSR Status

The attached New Source Review (NSR) checklist (Table I) summarizes the results of determinations of applicability of pertinent questions establishing NSR requirements. Based on the checklist, the proposed facility modification is not subject to NSR.

Emissions for the existing facility and the proposed modification are summarized on attached Table II. Calculations of the existing facility emissions are also included. Emissions calculations for the proposed modifications are given in Section V.

NEW SOURCE REVIEW (NSR) CHECKLIST

Pollutant (TPY)

<u>Question and Rule</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
Y 1. Is the existing facility a <u>major</u> facility as defined by 17-2.100 (113)? (>100 TPY) (115)	Y(278)	Y(278)	Y(1090)	Y(267)	N(25.6)	N(5.9)
Y 2. Would the existing facility be subject to NSR review under 17-2.500(2)(d)2. if it were new? (>250 TPY) [17-2.500 (2)(d)4.a.(i)]	Y(278)	Y(278)	Y(1090)	Y(267)	N(25.6)	N(5.9)
2 3. Will the modification result in a significant net emissions increase (Table 500-2)? [17-2.500(2)(d)4.a.(ii)]	N(14.2)	N(14.2)	N(39.9)	N(19.8)	N(2.9)	N(0.7)
2 4. Would the modification in and of itself be subject to NSR review under 17-2.500(2)(d)2.? (>250) [17-2.500(2)(d)3.]	N(14.2)	N(14.2)	N(39.9)	N(19.8)	N(2.9)	N(0.7)
5. Is the modification subject to NSR review?						
a. 17-2.500(2)(d)3.	N/A	N/A	N/A	N/A	No	No
b. 17-2.500(2)(d)4.a.	No	No	No	No	N/A	N/A
c. 17-2.500(2)(d)4.b.	N/A	N/A	N/A	N/A	N/A	N/A
6. NSR required?	No	No	No	No	No	No

EMISSIONS SUMMARY FOR EXISTING FACILITY

AND PROPOSED MODIFICATION (TONS/YEAR)

<u>Source</u>	<u>Total Particulate Matter</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>NO₂</u>	<u>CO</u>	<u>VOC</u>
Existing Facility	278	278	1090	267.3	25.6	5.9
Modification	14.2	14.2	39.9	19.8	2.9	0.7

Determine Present Emissions from the Existing Facility

1. Total Particulate Matter from Operating Permits

A016 - 107130	Ore crushing and conveying	516/hr	21.9 TPY ✓
A016 - 107127	Calcining kettles & material handling	39.4 lbs/hr	172.6 TPY ✓
A016 - 107128	Kettle fireboxes (fuel oil @ 1.5% S)	3.316/hr	14.4 TPY
A016 - 107131	Material handling and storage bins	516/hr	21.9 TPY ✓
A016 - 107129	Wallboard Dryer (fuel oil @ 1.5% and natural gas)		24.86 TPY ✓
A016 - 107097	Wallboard End Trim	516/hr	21.9 TPY ✓
			277.56 TPY

2. PM₁₀

Assume all PM emissions are less than 10 microns particle size, therefore, emissions are the same as total particulate matter.

3. Sulfur Dioxide

SO₂ emissions are maximum when firing fuel oil. Fuel oil has permitted maximum S = 1.5%.

	<u>Permitted Maximum Heat Inputs:</u>		
<u>Wallboard Dryer</u>	(Fuel Oil):	125 X 10 ⁶ Btuh	OK
	(Zone 1, Natural Gas):		
			30 X 10 ⁶ Btuh
<u>Kettle Fireboxes</u>	(Fuel Oil):	33 X 10 ⁶ Btuh	OK
	Total	158 X 10 ⁶ Btuh	30 X 10 ⁶ Btuh

$$\text{Fuel Oil Quantity} = \frac{158 \times 10^6 \text{ Btuh}}{1.49506 \times 10^5 \text{ Btuh/gal}} = \underline{1057 \text{ gal/hr}}$$

$$\frac{\text{AP-42 Factor for SO}_2 \text{ from fuel oil}}{\text{from fuel oil}} = 157 \text{ S} \frac{\text{lb, SO}_2}{10^3 \text{ gal}}$$

$$\frac{157 (1.5) \frac{\text{lb SO}_2}{10^3 \text{gal}} \times 1.057 \frac{10^3 \text{gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{1090 \text{ tons/yr}} \checkmark$$

AP-42 Factor for SO₂ = 0.6 lb/10⁶ft³
from Natural Gas

$$\frac{30 \times 10^6 \text{ Btuh} \times 0.6 \text{ lb/10}^6 \text{ft}^3 \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ft}^3 \times 2000 \text{ lb/ton}} = \underline{0.08 \text{ TPY}}$$

Neglect

4. Nitrogen Oxides

AP-42 Factor for NO_x = 55 lb/10³gal
for Fuel Oil

AP-42 Factor for NO_x = 100 lb/10⁶Ft³
for Natural Gas

Fuel Oil:

$$\frac{55 \text{ lb/10}^3 \text{gal} \times 1.057 \frac{10^3 \text{gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{254.6 \text{ TPY}}$$

ok

Natural Gas:

$$\frac{100 \text{ lb/10}^6 \text{ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ft}^3 \times 2000 \text{ lb/ton}} = \underline{12.7 \text{ TPY}}$$

Total NO_x = 267.3 TPY ✓

5. Carbon Monoxide

AP-42 Factor for CO = 5 lb/10³gal
for Fuel Oil

AP-42 Factor for CO = 20 lb/10⁶Ft³
for Natural Gas

Fuel Oil:

$$\frac{5 \text{ lb/10}^3 \text{gal} \times 1.057 \frac{10^3 \text{gal}}{\text{hr}} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = \underline{23.1 \text{ TPY}}$$

Natural Gas:

$$\frac{20 \text{ lb/10}^6 \text{ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh/10}^6 \text{ft}^3 \times 2000 \text{ lb/ton}} = \underline{2.5 \text{ TPY}}$$

Total CO = 25.6 TPY ✓

6. VOC

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Fuel Oil}} = 1.13 \text{ lb}/10^3\text{gal}$$

$$\frac{\text{AP-42 Factor for VOC}}{\text{for Natural Gas}} = 5.3 \text{ lb}/10^6\text{Ft}^3$$

Fuel Oil:

$$\frac{1.13 \text{ lb}/10^3\text{gal} \times 1.057 \times 10^3\text{gal/hr} \times 8760 \text{ hr/yr}}{2000 \text{ lb/ton}} = 5.2 \text{ TPY}$$

Natural Gas:

$$\frac{5.3 \text{ lb}/10^6\text{ft}^3 \times 30 \times 10^6 \text{ Btuh} \times 8760 \text{ hr/yr}}{1.035 \times 10^9 \text{ Btuh}/10^6\text{ft}^3 \times 2000 \text{ lb/ton}} = 0.7 \text{ TPY}$$

$$\text{Total VOC} = \underline{5.9 \text{ TPY}}$$

Attachment C

FUEL DATA
JACKSONVILLE PLANT

<u>CONTENTS</u>	<u>AMERADA HESS #6 FUEL OIL</u>	<u>WARREN PETRO. PROPANE</u>	<u>PEOPLE'S GAS NATURAL GAS</u>
Sulfur	1.45%	0%	0.2 grams/100 cu.ft
Ash	.02%	0%	0%
Density	7.984 lb./gal.	0.116 lb./cu.ft. 60° F	0.045 lb./cu.ft. 60° F
Heat Capacity	149,506 BTU/gal.	2507 BTU/CF dry vapor	1030-1040 BTU/CF
Nitrogen	N/A	0.%	0.4%

Contacts: Amerada Hess - 904/757-4498 - Richard
Warren Petroleum - 813/960-1500 - Mike
People's Gas - 904/739-1211 - Todd Widely

Figures

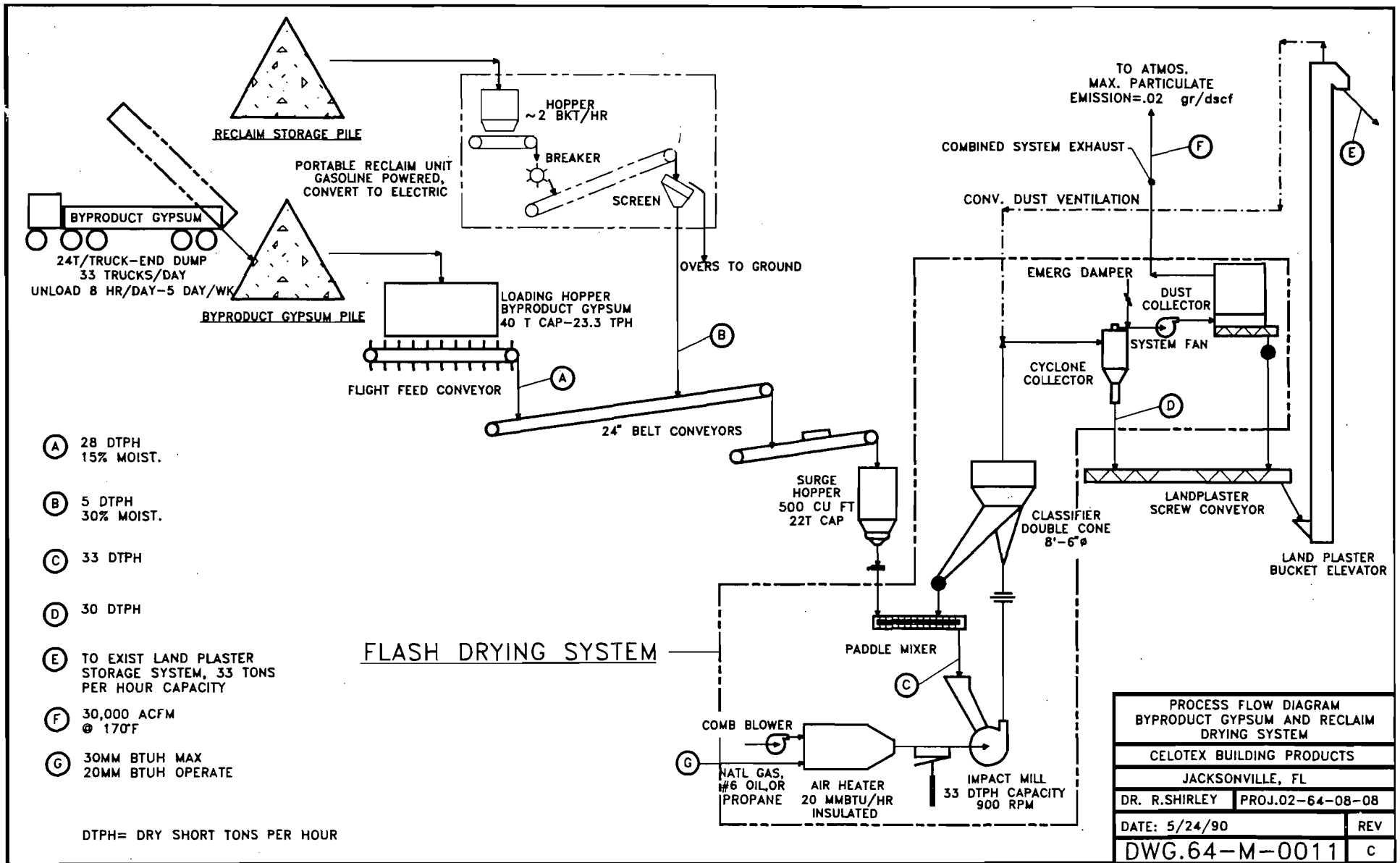
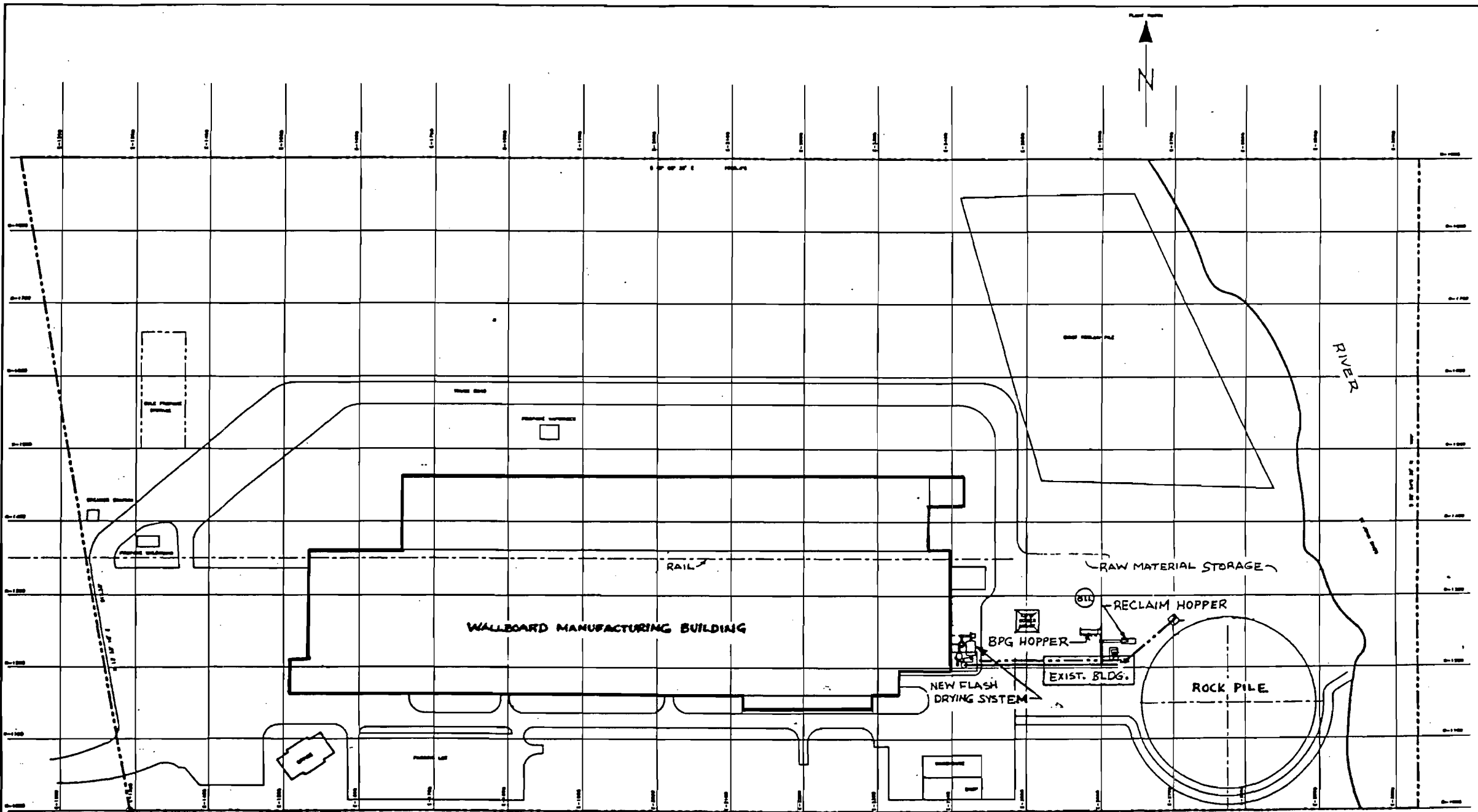


Figure 1



CELOTEX CORP. JACKSONVILLE, FL
 BYPROD GYPSUM & RECLAIM DRYING
 PLOT PLAN 7/6/90

Figure 2

NSPS

(Approved by the office of Management and Budget under control number 2060-0120)

§ 60.648 Optional procedure for measuring hydrogen sulfide in acid gas—Tutwiler Procedure.¹

(a) When an instantaneous sample is desired and H₂S concentration is ten grains per 1000 cubic foot or more, a 100 ml Tutwiler burette is used. For concentrations less than ten grains, a 500 ml Tutwiler burette and more dilute solutions are used. In principle, this method consists of titrating hydrogen sulfide in a gas sample directly with a standard solution of iodine.

(b) *Apparatus.* (See Figure 1.) A 100 or 500 ml capacity Tutwiler burette, with two-way glass stopcock at bottom and three-way stopcock at top which connect either with inlet tubulature or glass-stoppered cylinder, 10 ml capacity, graduated in 0.1 ml subdivision; rubber tubing connecting burette with leveling bottle.

(c) *Reagents.* (1) Iodine stock solution, 0.1N. Weight 12.7 g iodine, and 20 to 25 g cp potassium iodide for each liter of solution. Dissolve KI in as little water as necessary; dissolve iodine in concentrated KI solution, make up to proper volume, and store in glass-stoppered brown glass bottle.

(2) Standard iodine solution, 1 ml = 0.001771 g I. Transfer 33.7 ml of above 0.1N stock solution into a 250 ml volumetric flask; add water to mark and mix well. Then, for 100 ml sample of gas, 1 ml of standard iodine solution is equivalent to 100 grains H₂S per cubic feet of gas.

(3) Starch solution. Rub into a thin paste about one teaspoonful of wheat starch with a little water; pour into

about a pint of boiling water; stir; let cool and decant off clear solution. Make fresh solution every few days.

(d) *Procedure.* Fill leveling bulb with starch solution. Raise (L), open cock (G), open (F) to (A), and close (F) when solutions starts to run out of gas inlet. Close (G). Purge gas sampling line and connect with (A). Lower (L) and open (F) and (G). When liquid level is several ml past the 100 ml mark, close (G) and (F), and disconnect sampling tube. Open (G) and bring starch solution to 100 ml mark by raising (L); then close (G). Open (F) momentarily, to bring gas in burette to atmospheric pressure, and close (F). Open (G), bring liquid level down to 10 ml mark by lowering (L). Close (G), clamp rubber tubing near (E) and disconnect it from burette. Rinse graduated cylinder with a standard iodine solution (0.00171 g I per ml); fill cylinder and record reading. Introduce successive small amounts of iodine thru (F); shake well after each addition; continue until a faint permanent blue color is obtained. Record reading; subtract from previous reading, and call difference D.

(e) With every fresh stock of starch solution perform a blank test as follows: introduce fresh starch solution into burette up to 100 ml mark. Close (F) and (G). Lower (L) and open (G). When liquid level reaches the 10 ml mark, close (G). With air in burette, titrate as during a test and up to same end point. Call ml of iodine used C. Then,

Grains H₂S per 100 cubic foot of gas = 100 (D-C)

(f) Greater sensitivity can be attained if a 500 ml capacity Tutwiler burette is used with a more dilute (0.001N) iodine solution. Concentrations less than 1.0 grains per 100 cubic foot can be determined in this way. Usually, the starch-iodine end point is much less distinct, and a blank determination of end point, with H₂S-free gas or air, is required.

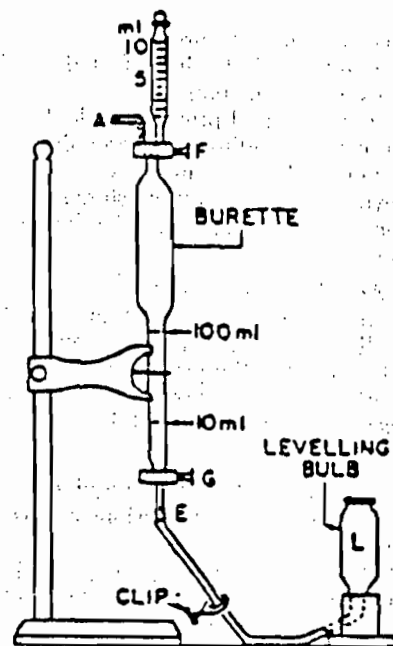


Figure 1. Tutwiler burette (lettered items mentioned in text).

Subparts MMM through NNN —
[Reserved]

[Subparts MMM — NNN added and reserved by 50 FR 7699, February 25, 1985]

Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

[Subpart OOO added by 50 FR 31337, August 1, 1985]

§60.670 Applicability and designation of affected facility.

(a) Except as provided in paragraphs (b), (c) and (d) of this section, the

¹ Gas Engineers Handbook, Fuel Gas Engineering Practices, The Industrial Press, 93 Worth Street, New York, N.Y., 1966, First Edition, Second Printing, page 6/25 (Docket A-80-20-A, Entry II-1-67).

[Sec. 60.670(a)]

provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

(b) An affected facility that is subject to the provisions of Subpart F or I or that follows in the plant process any facility subject to the provisions of Subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator seeking to comply with this paragraph shall comply with the reporting requirements of §60.676(a) and (b).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after

August 31, 1983 is subject to the requirements of this part.

§60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in Subpart A of this part.

"Bagging operation" means the mechanical process by which bags are filled with nonmetallic minerals.

"Belt conveyor" means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

"Bucket elevator" means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

"Building" means any frame structure with a roof.

"Capacity" means the cumulative rated capacity of all initial crushers that are part of the plant.

"Capture system" means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more process operations to a control device.

"Control device" means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more process operations at a nonmetallic mineral processing plant.

"Conveying system" means a device for transporting materials from one piece of equipment or location to another location within a plant.

Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

"Crusher" means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

"Enclosed truck or railcar loading station" means that portion of a

nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

"Fixed plant" means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbucket, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

"Fugitive emission" means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

"Grinding mill" means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

"Initial crusher" means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

"Nonmetallic mineral" means any of the following minerals or any mixture of which the majority is any of the following minerals:

(a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(b) Sand and Gravel.

(c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(d) Rock Salt.

(e) Gypsum.

(f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(g) Pumice.

(h) Gilsonite.

(i) Talc and Pyrophyllite.

(j) Boron, including Borax, Kernite, and Colemanite.

(k) Barite.

(l) Fluor spar.

(m) Feldspar.

(n) Diatomite.

(o) Perlite.

(p) Vermiculite.

(q) Mica.

[Sec. 60.671]

(r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

"Nonmetallic mineral processing plant" means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

"Portable plant" means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

"Production line" means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

"Screening operation" means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens).

"Size" means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

"Stack emission" means the particulate matter that is released to the atmosphere from a capture system.

"Storage bin" means a facility for storage (including surge bins) or nonmetallic minerals prior to further processing or loading.

"Transfer point" means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

"Truck dumping" means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

"Vent" means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

§ 60.672 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

- (1) Contain particulate matter in excess of 0.05 g/dscm; or *0.2 g/dscm*
- (2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device. Facilities using a wet scrubber must comply with the reporting provisions of § 60.676 (c), (d), and (e).

(b) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity, except as provided in paragraphs (c), (d) and (e) of this section.

(c) On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in § 60.671.

(2) No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(a) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accord-

[Sec. 60.674(a)]

ance with manufacturer's instructions.

(b) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

§ 60.675 Test methods and procedures.

[60.675 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.272(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(c) In determining compliance with the particulate matter standards in § 60.672 (b) and (c), the owner or operator shall use Method 9 and the procedures in § 60.11, with the following additions:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(d) In determining compliance with § 60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required § 60.676(c) using the monitoring devices in § 60.674 (a) and (b) during each particulate matter run and shall determine the averages.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in tons of the existing storage bin being replaced and

(ii) The rated capacity in tons of replacement storage bins.

(b) Each owner or operator seeking to comply with § 60.670(d) shall submit the following data to the Director of the Emission Standards and Engineering Division, (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

(1) The information described in § 60.676(a).

(2) A description of the control device used to reduce particulate matter emissions from the existing facility and a list of all other pieces of equipment controlled by the same device; and

(3) The estimated age of the existing facility.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ± 30 percent from the average determined during the most recent performance test.

[60.676(d) amended by 54 FR 6662, February 14, 1989]

(e) The reports required under paragraph (d) shall be postmarked within 30 days following end of the second and fourth calendar quarters.

[Sec. 60.676(e)]

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672, including reports of opacity observations made using Method 9 to demonstrate compliance with §60.672 (b) and (c) and reports of observations using Method 22 to demonstrate compliance with §60.672(e).

(g) The requirements of this paragraph remain in force until and unless the Agency, in delegating enforcement authority to a State under Section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with paragraphs (a), (c), (d), (e), and (f) of this subsection, provided that they comply with requirements established by the State. Compliance with paragraph (b) of this section will still be required.

[Approved by the Office of Management and Budget under control number 2060-0050]

Subpart PPP—Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

[Subpart PPP added by 50 FR 7699, February 25, 1985]

§60.680 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each rotary spin wool fiberglass insulation manufacturing line.

(b) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after February 7, 1984, is subject to the requirements of this subpart.

§60.681 Definitions.

"As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part.

"Glass pull rate" means the mass of molten glass utilized in the manufacture of wool fiberglass insulation at a single manufacturing line in a specified time period.

"Manufacturing line" means the manufacturing equipment comprising the form-

ing section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

"Rotary spin" means a process used to produce wool fiberglass insulation by forcing molten glass through numerous small orifices in the side wall of a spinner to form continuous glass fibers that are then broken into discrete lengths by high velocity air flow.

"Wool fiberglass insulation" means a thermal insulation material composed of glass fibers and made from glass produced or melted at the same facility where the manufacturing line is located.

§ 60.682 Standard for particulate matter.

On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

§ 60.683 Monitoring of operations.

(a) An owner or operator subject to the provisions of this subpart who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate, to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascals (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.

(b) An owner or operator subject to the provisions of this subpart who uses a wet electrostatic precipitator control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the primary and secondary current (amperes) and voltage in each electrical field and the inlet water flow rate. In addition, the owner or operator shall determine the total residue (total solids) content of the water entering the control device once per day using Method 209A, "Total Residue Dried at 103-105 °C,"

in *Standard Methods for the Examination of Water and Wastewater*, 15th Edition, 1980 (incorporated by reference—see § 60.17). Total residue shall be reported as percent by weight. All monitoring devices required under this paragraph are to be certified by their manufacturers to be accurate within ± 5 percent over their operating range.

(c) All monitoring devices required under this section are to be recalibrated quarterly in accordance with procedures under § 60.13(b).

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

§ 60.684 Recordkeeping and reporting requirements.

(a) At 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(a).

(b) At 30-minute intervals during each 2-hour test run of each performance test of a wet electrostatic precipitator control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by § 60.683(b), except that the concentration of total residue in the water shall be recorded once during each performance test and once per day thereafter.

(c) Records of the measurements required in paragraphs (a) and (b) of this section must be retained for at least 2 years.

(d) Each owner or operator shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraphs (a) and (b) of this section and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in § 60.683(c). For the purpose of these reports, exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent performance test.

(e) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of com-

[Sec. 60.684(e)]

pliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(Sec. 114 of the Clean Air Act, as amended (42 U.S.C. 7414))

(Approved by the Office of Management and Budget under control number 2060-0062)

§ 60.685 Test methods and procedures.

[60.685 revised by 54 FR 6662, February 14, 1989]

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.

(c) The owner or operator shall determine compliance with the particulate matter standard in § 60.682 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (C_1 Q_{ed}) / (P_{ave} K)$$

where:

E = emission rate of particulate matter, kg/Mg (lb/ton).

C_1 = concentration of particulate matter, g/dscm (g/dscf).

Q_{ed} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P_{ave} = average glass pull rate, Mg/hr (ton/hr).

K = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5E shall be used to determine the particulate matter concentration (C_1) and the volumetric flow rate (Q_{ed}) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90 dscf).

(3) The average glass pull rate (P_{ave}) for the manufacturing line shall be the arithmetic average of three glass pull rate (P_i) determinations taken at intervals of at least 30 minutes during each run.

The individual glass pull rates (P_i) shall be computed using the following equation:

$$P_i = K' L_e W_m M [1.0 - (LOI/100)]$$

where:

P_i = glass pull rate at interval "i", Mg/hr (ton/hr).

L_e = line speed, m/min (ft/min).

W_m = trimmed mat width, m (ft).

M = mat gram weight, g/m² (lb/ft²).

LOI = loss on ignition, weight percent.

K' = conversion factor, 6×10^{-4} (min-Mg)/(hr-g) [3×10^{-3} (min-ton)/(hr-lb)]

(i) ASTM Standard Test Method D2584-68 (Reapproved 1979) (incorporated by reference—see § 60.17), shall be used to determine the LOI for each run.

(ii) Line speed (L_e), trimmed mat width (W_m), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.

(d) To comply with § 60.684(d), the owner or operator shall record measurements as required in § 60.684 (a) and (b) using the monitoring devices in § 60.683 (a) and (b) during the particulate matter runs.

Subpart QQQ — Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems
[Added by 53 FR 47623, November 23, 1988]

§ 60.690 Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(2) An individual drain system is a separate affected facility.

(3) An oil-water separator is a separate affected facility.

(4) An aggregate facility is a separate affected facility.

(b) Notwithstanding the provisions of 40 CFR 60.14(e)(2), the construction or installation of a new individual drain system shall constitute a modification to an affected facility described in § 60.690(a)(4). For purposes of this paragraph, a new individual drain system shall be limited to all process drains and the first common junction box.

§ 60.691 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in Subpart A of 40 CFR Part 60, and the following terms shall have the specific meanings given them.

"Active service" means that a drain is receiving refinery wastewater from a process unit that will continuously maintain a water seal.

"Aggregate facility" means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

"Catch basin" means means an open basin which serves as a single collection point for stormwater runoff received directly from refinery surfaces and for refinery wastewater from process drains.

"Closed vent system" means a system that is not open to the atmosphere and is composed of piping, connections, and if necessary, flow inducing devices that transport gas or vapor from an emission source to a control device.

"Completely closed drain system" means an individual drain system that is not open to the atmosphere and is equipped and operated with a closed vent system and control device complying with the requirements of § 60.692-5.

"Control device" means an enclosed combustion device, vapor recovery system or flare.

"Fixed roof" means a cover that is mounted to a tank or chamber in a stationary manner and which does not move with fluctuations in wastewater levels.

"Floating roof" means a pontoon-type or double-deck type cover that rests on the liquid surface.

"Gas-tight" means operated with no detectable emissions.

"Individual drain system" means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

"Junction box" means a manhole or access point to a wastewater sewer system line.

"No detectable emissions" means less than 500 ppm above background levels, as measured by a detection instrument in accordance with Method 21 in Appendix A of 40 CFR Part 60.

"Non-contact cooling water system" means a once-through drain, collection and treatment system designed and operated for collecting cooling water which does not come into contact with hydrocarbons or oily wastewater and which is not recirculated through a cooling tower.

"Oil-water separator" means wastewater treatment equipment used to separate oil from water consisting of

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 61

Section 112

(AD-FRL-2764-7)

National Emission Standards for Hazardous Air Pollutants; Standards for Radionuclides**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rules.

SUMMARY: On April 6, 1983, the Environmental Protection Agency, pursuant to Section 112 of the Clean Air Act, published in the Federal Register proposed standards for sources of emissions of radionuclides to air. These included the following source categories: (1) Department of Energy (DOE) facilities; (2) Nuclear Regulatory Commission (NRC)-licensed facilities and non-DOE Federal facilities; (3) elemental phosphorus plants; and (4) underground uranium mines. Subsequently, on October 23, 1984, the Agency withdrew its proposed standards for the first three source categories on the grounds that current emission control and operational practices provide an ample margin of safety in protecting the public health from the hazards associated with exposure to airborne radionuclides from these sources. EPA continues to believe existing emissions from these sources are so low that the public health is already protected with an ample margin of safety, even without regulations. EPA also concluded it was impossible at the time to issue a legally valid final standard for uranium mines.

However, the U.S. District Court for the Northern District of California has ordered the Agency to either promulgate standards for the first three source categories by January 10, 1985, or to find that radionuclides are clearly not a hazardous pollutant, in essence "delisting" the pollutant from regulatory consideration under Section 112 of the Act. EPA believes that this order exceeds the District Court's jurisdiction and is appealing it to the Court of Appeals for the Ninth Circuit. As set forth in its withdrawal decision, EPA believes that, although emission levels from these three source categories are not hazardous, radionuclides cannot properly be delisted under Section 112 because radionuclide emissions from uranium mines appear to reach hazardous levels that warrant regulation. Under the provisions of the Court's order, however, the Agency is nonetheless required to issue standards

governing these three source categories. Accordingly, the Agency is promulgating final rules for DOE facilities, NRC-licensed and non-DOE Federal facilities, and elemental phosphorus plants. EPA continues to believe that its original position was correct and intends to pursue its appeal of the District Court's order. The Court also ordered EPA to promulgate final standards for underground uranium mines. EPA expects to promulgate these standards by April 10, 1985, the date specified in the Court order.

EFFECTIVE DATE: Final rules are effective on February 6, 1985. For existing sources, the standards shall not apply until 90 days after the effective date.

The information collection requirements contained in 40 CFR 61.94, 61.95, 61.96, 61.97, 61.104, 61.105, 61.107, 61.108, 61.123, 61.124, 61.125, 61.126; and, as they apply to radionuclide sources, 61.07, 61.09, 61.10, and 61.13 have not been approved by the Office of Management and Budget (OMB) and are not effective until OMB has approved them.

ADDRESSES: The rulemaking record is contained in Docket No. A-79-11. This docket is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section, West Tower Lobby, Gallery One, Waterside Mall, 401 M Street, S.W., Washington, D.C. 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: James M. Hardin, Environmental Standards Branch (ANR-460), Criteria and Standards Division, Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, D.C. 20460, (703) 557-8977.

SUPPLEMENTARY INFORMATION:**I. Supporting Documents**

A final Background Information Document has been prepared and single copies may be obtained by writing the Program Management Office, Office of Radiation Programs (ANR-458), U.S. Environmental Protection Agency, Washington, D.C. 20460, or by calling (703) 557-9351. Please refer to "NESHAPS—Radionuclides: Background Information Document for Final Rules, Volumes 1 and 2, [EPA 520/1-84-022-1, EPA 520/1-84-022-2], October 1984. Volume 1 of the Background Information Document contains a complete description of the Agency's methodology used in its risk assessment of the hazards associated with airborne emissions of radionuclides. Volume 2 contains a description of how the Agency applied

this methodology to each source category subject to this rulemaking.

The Agency has also prepared a final economic analysis of the impact of its standards on the elemental phosphorus industry, entitled "Regulatory Impact Analysis of Environmental Standards for Elemental Phosphorus Plants" [EPA 520/1-84-025], October 1984. In addition, a final report on control technology for radionuclide emissions to air at DOE facilities has been completed and is entitled "Control Technology for Radioactive Emissions to the Atmosphere at U.S. Department of Energy Facilities" [PNL-4621], October 1984. Single copies of both reports may be obtained from the Program Management Office, Office of Radiation Programs.

The Agency's decision to withdraw its proposed standards for radionuclide emissions from elemental phosphorus plants, DOE facilities, and NRC-licensed and non-DOE Federal facilities was published in the Federal Register on October 31, 1984 (43906). The notice contains a complete history of the rulemaking up to the withdrawal action, a summary of the major issues raised in public comments and the Agency's responses, alternatives considered, and the Agency's rationale for its decision to withdraw the proposed standards. Single copies of this document may be obtained by contacting the Program Management Office, Office of Radiation Programs.

II. History of Standards Development

On April 6, 1983, EPA announced in the Federal Register its proposed standards for sources of emissions of radionuclides from four categories: (1) DOE facilities; (2) NRC-licensed facilities and non-DOE Federal facilities; (3) elemental phosphorus plants; and (4) underground uranium mines. The notice also identified several additional source categories which emit radionuclides. However, the Agency concluded that good reasons existed to propose not to regulate these categories, which included: (1) coal-fired boilers; (2) the phosphate industry; (3) other extraction industries; (4) uranium fuel cycle facilities, uranium mill tailings, and management of high-level radioactive waste; and (5) low energy accelerators (48 FR 15076, April 6, 1983). At the time of proposal, these nine source categories were considered to be all that might potentially release radionuclides to air at levels that could warrant regulatory attention.

On February 17, 1984, the Sierra Club filed suit to compel final action in the U.S. District Court for the Northern

District of California, pursuant to the citizens' suit provision of the Act (*Sierra Club v. Ruckelshaus*, No. 84-0656 WHO). On July 25, 1984, the Court granted Sierra Club's summary judgment motion and ordered EPA to promulgate standards or make a finding that radionuclides are not a hazardous air pollutant within 90 days of the date of the order.

On October 23, 1984, EPA withdrew its proposed standards for radionuclide emissions from the following categories: (1) elemental phosphorus plants; (2) DOE facilities; (3) NRC-licensed facilities and non-DOE Federal facilities; and (4) underground uranium mines. The Agency also affirmed its original decision not to regulate emissions from the five other source categories considered (49 FR 43906, October 31, 1984). The proposed standards for the first three categories were withdrawn because the Administrator determined that current practice provides an ample margin of safety in protecting the public health from the hazards associated with exposure to radionuclides from these sources.

In the case of underground uranium mines, the Administrator withdrew the proposed standard because it did not meet the legal requirements of section 112 of the Clean Air Act. Simultaneous with this action, the Agency published an Advance Notice of Proposed Rulemaking for radon-222 emissions from underground uranium mines to solicit additional information on control methods such as bulkheading and other forms of operational controls for radon-222 which would meet the legal requirements of section 112 (49 FR 43915, October 31, 1984).

On October 31, 1984, the U.S. District Court, Northern District of California issued an order requiring the Administrator and the Agency to show cause why they should not be held in contempt of the Court's July 25 order. A Court hearing was held on November 21, 1984, to consider the issue. In a ruling on December 11, 1984, the Court found the Administrator and the Agency in contempt and ordered the following remedial action:

1. (a) Issue within 30 days of the date of the order final radionuclide emission standards for DOE facilities, NRC-licensed and non-DOE Federal facilities, and elemental phosphorus plants, and
- (b) Issue within 120 days of the date of the order final radionuclide emission standards for uranium mines; or
2. Make a finding based on the information presented at hearings during the rulemaking, that radionuclides are clearly not a hazardous pollutant.

On December 21, 1984, EPA requested a stay of the District Court's order; this request was denied on January 3, 1985. The Agency subsequently requested a stay from the 9th Circuit Court of Appeals on January 8, 1985. This request was also denied. However, the Court did allow the Agency an additional seven days to provide time for further appeal to the U.S. Supreme Court. These efforts also failed. Therefore, to comply with the District Court's EPA is promulgating standards for radionuclide emissions to air from DOE facilities, NRC-licensed and non-DOE Federal facilities, and elemental phosphorus plants. Litigation regarding these three standards is continuing.

III. Summary of Decision

As stated above, EPA withdrew proposed standards for the three categories that are the subject of this notice based on the judgment that emissions from these source categories are presently controlled at levels that provide an ample margin of safety in protecting public health from the hazards associated with exposure to airborne radionuclides. In reaching this judgment, EPA considered the available evidence, including public comments on its proposed standards and information developed since that proposal.

In the case of DOE facilities and NRC-licensed and non-DOE Federal facilities, the risk was judged too small to warrant regulation. Since the beginning of regulation under section 112, EPA has interpreted this section as not requiring regulation in cases where the risks from a category of sources do not exceed a certain minimum threshold. Indeed, contrary interpretations lead to results that are hard to defend from any logical or policy perspective. The risks presented by radionuclide emissions from these source categories are not as great as risks that EPA has found insufficient to trigger regulation in prior rulemakings under section 112. The health gains from regulation, as represented by the difference between the risk before and after regulation, are smaller still.

In the case of elemental phosphorus plants, the risks are also very small. In addition, the cost of controls compared to the amount that the risk is reduced is far higher than EPA has imposed in prior regulatory decisions under section 112.

At the same time, EPA believed that radionuclides could not properly be delisted because a fourth category of sources, uranium mines, did emit radionuclides in amounts that appeared to warrant regulation.

None of these circumstances has changed since October 23, EPA

continues to believe that its original position was correct and hopes that future litigation will permit the Agency to return to that position. However, the District Court's December 11 order and the subsequent denials of stays, compel issuance of standards for these three categories absent a decision by EPA to delist radionuclides. For the reasons discussed in detail in the Advance Notice of Proposed Rulemaking for underground uranium mines and the Federal Register notice published on October 31, EPA cannot conclude that radionuclides are clearly not hazardous, and thereby delist.

The standards established today limit radionuclide emissions from DOE facilities to an amount that causes a dose equivalent rate of 25 mrem/y to the whole body or a dose equivalent rate of 75 mrem/y to the critical organ of any member of the public. This standard excludes doses due to radon-220, radon-222, and their respective decay products. For NRC-licensed and non-DOE Federal facilities, EPA is promulgating a standard which limits radionuclide emissions from these facilities to an amount that causes a dose equivalent rate of 25 mrem/y to the whole body or a dose equivalent rate of 75 mrem/y to the critical organ of any member of the public. This standard also excludes doses due to radon-220, radon-222, and their respective decay products. EPA will grant a waiver of the limits of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public and issue alternative standards, if a facility operator demonstrates that no member of the public will receive a continuous exposure of more than 100 mrem/y effective dose equivalent and a noncontinuous exposure of more than 500 mrem/y effective dose equivalent from all sources, excluding natural background and medical procedures. In the case of elemental phosphorus plants, EPA is promulgating a standard which limits the total emissions of polonium-210 from calciners and nodulizing kilns at these plants to 21 Ci/y. These limits will assure that emissions do not increase over present levels.

IV. Rationale for Standards

A. Department of Energy Facilities

The DOE administers many government-owned, contractor-operated facilities that emit radionuclides to the air. Operations at these facilities include research and development, production of nuclear weapons, enrichment of uranium and production of plutonium for nuclear weapons and reactors, and

processing, storing, and disposing of radioactive wastes. These facilities are on large sites, some of which cover hundreds of square miles in remote areas, and are located in about 20 different states. Some smaller facilities resemble typical industrial sites and are located in suburban areas.

The Agency estimates that the total population risk from radionuclide emissions to air from all DOE facilities is about 0.07 fatal cancer cases per year, or one case every 14 years. The risk to nearby individuals exposed to the most concentrated of the plants' emission is about one in ten thousand to seven in ten thousand.

DOE facilities currently operate under a policy of keeping radionuclide emissions "as low as reasonably achievable" (ALARA). This policy has generally led to low emissions from most facilities and EPA expects that this current policy will continue.

The Agency is promulgating a final standard that will limit radionuclide emissions to air from DOE facilities to that amount which will cause a dose equivalent of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. These limits generally reflect current emission levels achieved by existing control technology and operating practices at DOE facilities.

This final rule does not apply to radon-220, radon-222 and their respective decay products. These radionuclides are exempted because the Agency currently has very little information regarding the emissions of these radionuclides from DOE facilities. However, available information suggests that the DOE facilities that are covered by this standard are likely only to have relatively small total quantities of materials containing radium-224 and radium-226, the sources of radon-220 and radon-222, respectively. The quantities of these materials will be much smaller than uranium mill tailings piles, for example. In practice, EPA expects DOE will seal up all significant sources of radon emissions to air or take other appropriate control action as part of their ALARA program. In addition, it would not be appropriate to establish a dose equivalent standard for radon-220 and radon-222 because radon decay products cause exposure primarily to only a small part of the lung—the bronchial epithelia cells. Such an exposure cannot be accurately expressed as a dose equivalent to the lung.

For DOE facilities that exceed the limits of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public, EPA will issue

alternative standards, if DOE demonstrates that no member of the public will receive a continuous exposure of more than 100 mrem/y effective dose equivalent and a noncontinuous exposure of more than 500 mrem/y effective dose equivalent from all sources, excluding natural background and medical procedures. This provision applies to those specific DOE facilities where emissions may exceed the limits of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. These provisions embody the recommendations of the National Council on Radiation Protection and Measurements for exposure to external radiation ("Control of Air Emissions of Radionuclides," National Council on Radiation Protection and Measurements, September 18, 1984).

B. Nuclear Regulatory Commission-Licensed Facilities and Non-DOE Federal Facilities

NRC-licensed and non-DOE Federal facilities include research and test reactors, shipyards, the radiopharmaceutical industry, and other research and industrial facilities. This category includes both facilities licensed by NRC and facilities licensed by a State under an agreement with NRC. These facilities number in the thousands and are located in all fifty States. Uranium fuel cycle facilities are not included because radionuclide emissions from these facilities are limited by standards promulgated previously by EPA (40 CFR Part 190).

The Agency estimates that the total population risk from radionuclide emissions to air from all NRC-licensed facilities and non-DOE Federal facilities is no more than 0.001 fatal cancer case per year, or one case every one thousand years. The risk to nearby individuals exposed to the most concentrated of the plants' emissions is about two in one hundred thousand.

The NRC and all non-DOE Federal facilities currently operate under a policy of keeping radionuclide emissions "as low as reasonably achievable" (ALARA). This policy has generally led to low emissions from most facilities and the Agency expects that this policy will continue.

The Agency is promulgating a final standard that will limit radionuclide emissions to air from these facilities to that amount which will cause a dose equivalent of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. These limits reflect current emission levels achieved by existing control technology

and operating practices at NRC-licensed facilities and non-DOE Federal facilities.

This standard, similarly, does not apply to radon-220, radon-222, and their respective decay products. Facilities covered by this standard are likely only to have relatively small quantities of the sources of these radionuclides and are expected to take appropriate control action to limit emissions as part of the NRC's ALARA program.

For facilities that exceed the limits of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public, EPA will issue alternative standards, if a facility operator demonstrates that no member of the public will receive a continuous exposure of more than 100 mrem/y effective dose equivalent and a noncontinuous exposure of more than 500 mrem/y effective dose equivalent from all sources, excluding natural background and medical procedures. This provision applies to those specific NRC-licensed and non-DOE Federal facilities where emissions may exceed 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. These provisions embody the recommendations of the National Council on Radiation Protection and Measurements for exposure to external radiation ("Control of Air Emissions of Radionuclides," National Council on Radiation Protection and Measurements, September 18, 1984).

After reviewing comments, EPA has concluded that the great majority of NRC-licensed facilities are licensed to possess such small quantities of radionuclides, that even given the most conservative assumptions, they are unlikely to emit radionuclides at a level that would violate the standard during normal operation. Therefore, these facility owners will not be required to submit an initial report (40 CFR 61.10). EPA has established a simple procedure (40 CFR 61.106) to exempt most of these licensees from the initial reporting requirements of the Clean Air Act. EPA expects that all but a few (less than 100) facilities licensed by the NRC could make use of this exemption; the remainder are major facilities using large amounts of radionuclides. Radiation safety personnel at these facilities are expected to have the skill necessary to demonstrate compliance.

Many facilities are licensed by NRC to obtain and use sealed sources of radionuclides. Such sources have no potential to routinely release radionuclides to air and have, therefore, been exempted from this final rule. In addition, low energy accelerators have

been exempted because EPA concluded that emissions from these sources are negligible (49 FR 43906, October 31, 1984).

C. Elemental Phosphorus Plants

There are six elemental phosphorus plants in the United States which process phosphate rock into elemental phosphorus that is used in the production of phosphoric acid, phosphate-based detergents, and organic chemicals. Some of the uranium decay products, polonium-210 and lead-210, contained in the phosphate rock are volatilized by the high temperatures in the plant calciners.

The Agency estimates that the total population risk from radionuclide emissions to air from all elemental phosphorus plants in about 0.06 fatal cancer cases per year, or one case every seventeen years. The risk to nearby individuals exposed to the most concentrated of the plants' emissions is about one in one thousand.

The Agency is promulgating a standard which limits the total emissions of polonium-210 from calciners and nodulizing kilns at these plants to 21 Ci/y. This standard reflects current emission levels achieved by existing control technology and operating practices at elemental phosphorus plants.

The areas surrounding two plants, the FMC plant in Pocatello, Idaho, and the Monsanto plant in Soda Springs, Idaho, are characterized by high total levels of radiation from a variety of sources. The storage and widespread use of slag and possibly other waste products from these plants have significantly increased the natural background radiation levels in parts of the communities. In particular, phosphate slag from these plants has been widely used as aggregate in road and house construction in these areas. EPA and the State of Idaho will initiate a total assessment of the various sources and will investigate ways to reduce or prevent risks from growing.

V. Miscellaneous

A. Docket

The docket is an organized and complete file of all information considered by EPA in the development of the standards. The docket allows interested persons to identify and locate documents so they can effectively participate in the rulemaking process. It also serves as the record for judicial review.

Transcripts of the hearings, all written statements, the Agency's response to comments, and other relevant

documents have been placed in the docket and are available for inspection and copying during normal working hours.

B. General Provisions

The general provisions of 40 CFR Part 61, Subpart A apply to all sources regulated by this rule.

C. State Implementation of Enforcement and Emission Standards

Under section 112(d)(1) of the Act, any State may develop and submit to the Administrator a procedure for implementing and enforcing emission standards for hazardous air pollutants for stationary sources located in such State. If the Administrator finds a State's procedure for implementing the standard adequate, the Federal authority then is delegated to the State. To streamline this procedure, some of EPA's Regional offices have entered into agreements with certain States for "automatic" delegation of new section 112 standards. Under this arrangement, States are delegated authority to implement and enforce all new section 112 standards when they are issued.

The Agency has decided that "automatic" delegation shall not be made for the radionuclide final rules. When EPA entered into these agreements, the State's capabilities and expertise with respect to radionuclides were not considered. Therefore, States must reapply for delegation in the case of radionuclide final rules.

D. Measurement Techniques and Waivers of Compliance

The Agency recognizes that today's notice does not contain descriptions of EPA's approved measurement techniques for measuring emissions and estimating dose. The Agency will publish a list shortly of methods it believes suitable for the purpose of implementing its final rules for DOE facilities and NRC-licensed and non-DOE Federal facilities. Owners of such facilities are invited to submit procedures for inclusion on this list of Agency approved procedures. Submissions should be sent to the Director, Criteria and Standards Division (ANR-460), Office of Radiation Programs, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

This rule is effective immediately for new sources and after 90 days for existing facilities. Those facilities that are not in compliance with the final rule based on information currently available to them and who may wish to request a waiver from the Administrator under the provisions of section 112(c)(1)

shall follow the procedures established under § 61.10 for waiver of compliance, as modified in this rule.

E. Communications

Communications with the Administrator regarding the reporting and recordkeeping requirements of this rule, as well as requests for waivers, shall follow the provisions of § 61.10, except as otherwise noted in this rule.

F. Executive Order 12291

Under Executive Order 12291, issued February 17, 1981, EPA must judge whether a rule is a "major rule" and, therefore, requires that a Regulatory Impact Analysis be prepared. EPA has determined that this rule is not a major rule as defined in section 1(b) of the Executive Order because the annual effect of the rule on the economy will be less than \$100 million. Also, it will not cause a major increase in costs or prices for any sector of the economy or for any geographic region. Further, it will not result in any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States enterprises to compete with foreign enterprises in domestic or foreign markets. Under Executive Order 12291, this regulation was submitted to the Office of Management and Budget (OMB) for review. Any comments from OMB to EPA and any response to those comments are included in the docket.

G. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1980 U.S.C. 3501, *et seq.*, the information collection provisions in this rule will be submitted for approval to the Office of Management and Budget (OMB). They are not effective until OMB approves them. A notice of that approval will be published in the *Federal Register*. Further, EPA will not require reporting until it publishes the list of acceptable measurement techniques described in §§ 61.93 and 61.103.

H. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis" in connection with any rulemaking for which there is a statutory requirement that a general notice of proposed rulemaking be published. The "initial regulatory flexibility analysis" describes the effect of the proposed rule on small business entities.

However, section 604(b) of the Regulatory Flexibility Act provides that section 603 "shall not apply to any proposed . . . rule if the head of the Agency certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."

EPA believes that virtually all small businesses covered by this final rule already comply. Therefore, this rule will have little or no impact on small businesses. A small business is one that has 750 employees or fewer.

For the preceding reasons, I certify that this rule will not have significant economic impact on a substantial number of small entities.

I. Judicial Review

Judicial review of these standards is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of today's publication date. The requirements established in this notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce them.

List of Subjects in 40 CFR Part 61

Air pollution control, Hazardous materials, Asbestos, Beryllium, Mercury, Vinyl chloride, Benzene, Arsenic, Radionuclides.

Dated: January 17, 1985.

Lee M. Thomas,
Acting Administrator.

PART 61—[AMENDED]

Part 61 of Chapter I of Title 40 of the Code of Federal Regulations is amended as follows:

1. By adding Subparts H, I, and K to read as follows:

Subpart H—National Emission Standard for Radionuclide Emissions From Department of Energy (DOE) Facilities

Sec.	
61.90	Designation of facilities.
61.91	Definitions.
61.92	Emission standard.
61.93	Emission monitoring and compliance procedures.
61.94	Reporting.
61.95	Recordkeeping. [Reserved]
61.96	Waiver of compliance.
61.97	Alternative emission standards.
61.98	Exemption from reporting and testing requirements of 40 CFR 61.10.

Subpart I—National Emission Standard for Radionuclide Emissions From Facilities Licensed by the Nuclear Regulatory Commission (NRC) and Federal Facilities Not Covered by Subpart H

Sec.	
61.100	Designation of facilities.
61.101	Definitions.
61.102	Emission standard.
61.103	Emission monitoring and compliance procedures.
61.104	Reporting. [Reserved]
61.105	Recordkeeping. [Reserved]
61.106	Exemption from reporting and testing requirements of 40 CFR 61.10.
61.107	Waiver of compliance.
61.108	Alternative emission standards.

Subpart K—National Emission Standard for Radionuclide Emissions From Elemental Phosphorus Plants

61.120	Applicability.
61.121	Definitions.
61.122	Emission standard.
61.123	Emission testing.
61.124	Test methods and procedures.
61.125	Monitoring of operations.
61.126	Waiver of compliance.

Authority: Secs. 112 and 301(a), Clean Air Act, as amended (42 U.S.C. 7412, 7601(a)).

Subpart H—National Emission Standard for Radionuclide Emissions From Department of Energy (DOE) Facilities

§ 61.90 Designation of facilities.

The provisions of this subpart apply to all facilities that are owned or operated by the Department of Energy, except any facility regulated under 40 CFR Parts 190, 191, or 192.

§ 61.91 Definitions.

(a) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body. The unit of the dose equivalent is the rem.

(b) "Critical organ" means the most exposed human organ or tissue exclusive of the integumentary system (skin) and the cornea.

(c) "Radionuclide" means any nuclide that emits radiation. (A nuclide is a species of atom characterized by the constitution of its nucleus and hence by the number of protons, the number of neutrons, and the energy content.)

(d) "Whole body" means all human organs or tissue exclusive of the integumentary system (skin) and the cornea.

(e) "Effective dose equivalent" means the sum of the products of the dose

equivalents to individual organs and tissues and appropriate weighing factors representing the risk relative to that for an equal dose to the whole body.

§ 61.92 Emission standard.

Emissions of radionuclides to air from DOE facilities shall not exceed those amounts that cause a dose equivalent of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. Doses due to radon-220, radon-222, and their respective decay products are excluded from these limits.

§ 61.93 Emission monitoring and compliance procedures.

To determine compliance with the standard, radionuclide emissions shall be determined and dose equivalents to members of the public shall be calculated using EPA approved sampling procedures, EPA models AIRDOS-EPA and RADRISK, or other procedures, including those based on environmental measurements, that EPA has determined to be suitable. Compliance with this standard will be determined by calculating the dose to members of the public at the point of maximum annual air concentration in an unrestricted area where any member of the public resides or abides.

List of approved methods: [Reserved]

§ 61.94 Reporting.

(a) The following provisions of § 61.10 are applicable to DOE-owned facilities: paragraphs (b)-(d).

(b) The following provisions are also applicable:

(1) The owner or operator of any existing source, or any new source to which a standard prescribed under this part is applicable which had an initial startup which preceded the effective date of a standard prescribed under this part shall, within 90 days after the effective date, provide the following information in writing to the Administrator:

(i) Name and address of the owner or operator.

(ii) The location of the source.

(iii) The types of radionuclides emitted by the stationary source and the annual quantity (in Ci/y for the most recent calendar year) of each radionuclide emitted.

(iv) A brief description of the nature, size, design, and method of operation of the stationary source including the operating design capacity of such source. Identify each point of emission for each hazardous pollutant.

(v) Estimate of dose equivalent rate to the member of the public at the point of maximum annual air concentration in an unrestricted area where an individual resides or abides.

(vi) A description of the existing control equipment for each emission point.

(A) Primary control device(s) for radionuclide emissions.

(B) Secondary control device(s) for radionuclide emissions.

(C) Estimated control efficiency (percent) for each control device.

(vii) A statement by the owner or operator of the source as to whether he can comply with the standards prescribed in this part within 90 days of the effective date.

All information collection provisions in this subpart are not effective until the Office of Management and Budget approves them.

(c) In addition to the reporting requirements described in paragraphs (a) and (b) of this section, DOE shall submit to EPA an annual report, by June 1, 1986, and annually thereafter, that includes the results of monitoring emissions from points subject to this final rule and associated dose calculations. This information shall be based on data collected during the calendar year immediately preceding the required date of submission of the annual report. This report shall be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, Washington, D.C. 20460.

§ 61.95 Recordkeeping. [Reserved]

§ 61.96 Waiver of compliance.

To request a waiver, applicants shall provide the information required in § 61.11 and § 61.94 (a) and (b). Waiver requests shall be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, Washington, D.C. 20460.

§ 61.97 Alternative emission standards.

If a facility may exceed the values established in § 61.92, DOE may apply to EPA for an alternative emission standard. The Administrator will review such applications and will establish an appropriate alternative emission standard that will ensure that no member of the public being exposed to emissions from the facility will receive a continuous exposure of than 100 mrem/y effective dose equivalent and a noncontinuous exposure of more than 500 mrem/y effective dose equivalent

from all sources, excluding natural background and medical procedures. The application shall include the following:

(a) An assessment of the additional effective dose equivalents to the individual receiving maximum exposure from the facility due to all other sources.

(b) The information required in § 61.94.

(c) The effective dose equivalent shall be calculated using the following weighting factors:

Organ	Weighting factor
[Reserved]	[Reserved]

Requests for alternative emission standards shall be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, 401 M Street, Washington, D.C. 20460.

§ 61.98 Exemption from reporting and testing requirements of 40 CFR 61.10.

Facilities having emissions of radionuclides to air that do not exceed those amounts that cause a dose equivalent of 5 mrem/y to the whole body or 15 mrem/y to the critical organ of any member of the public residing or abiding at the point of maximum annual air concentration in an unrestricted area, are exempt from the reporting requirements of 40 CFR 61.10.

Subpart I—National Emission Standard for Radionuclide Emissions From Facilities Licensed by the Nuclear Regulatory Commission (NRC) and Federal Facilities Not Covered by Subpart H

§ 61.100 Designation of facilities.

The provisions of this subpart apply to NRC-licensed facilities and to facilities owned or operated by any Federal agency other than the Department of Energy that emit radionuclides to air. This subpart does not apply to facilities regulated under 40 CFR Parts 190, 191, or 192, to any low energy accelerator, or to any user of the sealed radiation sources.

§ 61.101 Definitions.

(a) "Agreement State" means any State with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274(b) of the Atomic Energy Act of 1954, as amended.

(b) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness

due to the quality of radiation and its distribution in the body. The unit of dose equivalent is the rem.

(c) "NRC-licensed facility" means any facility licensed by the Nuclear Regulatory Commission or any Agreement State to receive title to, receive, possess, use, transfer, or deliver any source, byproduct, or special nuclear material, except facilities regulated by 40 CFR Parts 190, 191, or 192.

(d) "Critical organ" means the most exposed human organ or tissue exclusive of the integumentary system (skin) and the cornea.

(e) "Radionuclide" means any nuclide that emits radiation. (A nuclide is a species of atom characterized by the constitution of its nucleus and hence by the number of protons, the number of neutrons, and the energy content.)

(f) "Whole body" means all organs or tissues exclusive of the integumentary system (skin) and the cornea.

(g) "Effective dose equivalent" means the sum of the products of the dose equivalents to individual organs and tissues and appropriate weighting factors representing the risk relative to that for an equal dose to the whole body.

§ 61.102 Emission standard.

Emissions of radionuclides to air from facilities subject to this subpart shall not exceed those amounts that cause a dose equivalent of 25 mrem/y to the whole body or 75 mrem/y to the critical organ of any member of the public. Doses due to radon-220, radon-222, and their respective decay products are excluded from these limits.

§ 61.103 Emission monitoring and compliance procedures.

To determine compliance with the standard, radionuclide emissions shall be determined and dose equivalent to members of the public shall be calculated using EPA-approved sampling procedures, EPA codes AIRDOS-EPA and RADRISK, or other procedures, including those based on environmental measurements, that EPA has determined to be suitable. In most cases, compliance with this standard will be determined by calculating the dose to members of the public at the point of maximum annual air concentration in an unrestricted area where any member of the public resides or abides.

List of approved procedures: [Reserved]

§ 61.104 Reporting. [Reserved]

§ 61.105 Recordkeeping. [Reserved]

§ 61.106 Exemption from reporting and testing requirements of 40 CFR 61.10.

Facilities in possession of a radionuclide in annual quantities less than the activity shown in Table 1 are exempt from the reporting requirements of 40 CFR 61.10. If a facility possesses more than one radionuclide, and the sum of the annual amount possessed divided by the equivalent activity in Table 1 is summed for all radionuclides in possession, and the sum is less than unity, then the facility is exempt from the reporting requirements of 40 CFR 61.10. For radionuclides not on this list, a facility may apply to the Administrator for an exemption from the reporting requirements.

Table 1 [Reserved]

§ 61.107 Waiver of compliance.

(a) To request a waiver, applicants shall follow the requirements of § 61.10 (b)-(d).

(b) The following provisions also apply:

(1) the owner or operator of any existing source, or any new source to which a standard prescribed under this part is applicable which had an initial startup which preceded the effective date of a standard prescribed under this part shall, within 90 days after the effective date, provide the following information in writing to the Administrator:

(i) Name and address of the owner or operator.

(ii) The location of the source.

(iii) The types of radionuclides emitted by the stationary source and the annual quantity (in Ci/y for the most recent calendar year) of each radionuclide emitted.

(iv) A brief description of the nature, size, design, and method of operation of the stationary source including the operating design capacity of such source. Identify each point of emission for each hazardous pollutant.

(v) Estimate of dose equivalent rate to the member of the public at the point of maximum annual air concentration in an unrestricted area where any member of the public resides or abides.

(vi) A description of the existing control equipment for each emission point.

(A) Primary control device (s) for radionuclide emissions.

(B) Secondary control device(s) for radionuclide emissions.

(C) Estimated control efficiency (percent) for each control device.

(vii) A statement by the owner or operator of the source as to whether he

can comply with the standards prescribed in this part within 90 days of the effective date.

§ 61.108 Alternative emission standard.

If a facility may exceed the emission standard established in § 61.102, the operator may apply to EPA for an alternative emission standard. The Administrator will review such applications and will establish an appropriate alternative emission standard that will ensure that no member of the public being exposed to emissions from the facility receives a continuous exposure of more than 100 mrem/y effective dose equivalent and a noncontinuous exposure of more than 500 mrem/y effective dose equivalent from all sources, excluding natural background and medical procedures. The application shall include the following:

(a) An assessment of the additional effective dose equivalents to the member of the public receiving maximum exposure from the facility due to all other sources. The natural radiation background shall be part of this assessment.

(b) The information required in § 61.107.

(c) The effective dose equivalent shall be calculated using the following weighting factors:

Organ	Weighting factor
[Reserved]	[Reserved]

Requests for alternative emission standards shall be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460. This action shall be taken, for existing facilities by April 17, 1985.

Subpart K—National Emission Standard for Radionuclide Emissions From Elemental Phosphorus Plants

§ 61.120 Applicability.

The provisions of this subpart are applicable to owners and operators of calciners and nodulizing kilns at elemental phosphorus plants.

§ 61.121 Definitions.

(a) "Elemental phosphorus plant" means any facility that processes phosphate rock to produce elemental phosphorus using pyrometallurgical techniques.

(b) "Calciner" or "Nodulizing kiln" means a unit in which phosphate rock is heated to high temperatures to remove organic material and/or to convert it to a nodular form. For the purpose of this

subpart, calciners and nodulizing kilns are considered to be similar units.

(c) "Curie" is a unit of radioactivity equal to 37 billion nuclear transformations (decays) per second.

§ 61.122 Emission standard.

Emissions of polonium-210 to air from calciners and nodulizing kilns at an elemental phosphorus plant shall not exceed a total of 21 curies in a calendar year.

§ 61.123 Emission testing.

(a) Unless a waiver of emission testing is obtained under § 61.13, each owner or operator of an elemental phosphorus plant shall test emissions from his plant according to the following requirements:

(1) Within 90 days of the effective date of this standard for a source that has an initial start-up date preceding the effective date of this standard; or

(2) Within 90 days of start-up for a source, that has an initial startup after the effective date of the standard.

(b) The Administrator shall be notified at least 30 days prior to an emission test so that EPA may, at its option, observe the test.

(c) An emission test shall be conducted at each operational calciner or nodulizing kiln. If emissions from a calciner or nodulizing kiln are discharged through more than one stack, then an emission test shall be conducted at each stack and the total emission rate from the calciner or kiln shall be the sum of the emission rates from each of the stacks.

(d) Each emission test shall consist of three valid sampling runs. The phosphate rock processing rate during each run shall be recorded. An emission rate in curies per metric ton of phosphate rock processed shall be calculated for each run. The average of all three runs shall apply in computing the emission rate for the test. The annual polonium-210 emission rate from a calciner or nodulizing kiln shall be determined by multiplying the measured polonium-210 emission rate in curies per metric ton of phosphate rock processed by the annual phosphate rock processing rate in metric tons. In determining the annual phosphate rock processing rate, the values used for operating hours and operating capacity shall be values that will maximize the expected processing rate. For determining compliance with the emission standard of Section 61.122 the total annual emission rate is the sum of the annual emission rates for all operating calciners or nodulizing kilns.

(e) If the owner or operator changes his operation in such a way as to increase his emissions of polonium-210, such as changing the type of rock processed, the temperature of the calciners or kilns, or increasing the annual phosphate rock processing rate, then a new emission test shall be conducted under these conditions.

(f) Each owner or operator of an elemental phosphorus plant shall furnish the Administrator a written report of the results of the emission test within 60 days of conducting the test.

(g) Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Administrator for a minimum of 2 years.

All information collection provisions in this subpart are not effective until the Office of Management and Budget approves them.

§ 61.124 Test methods and procedures.

(a) Each owner or operator of a source required to test emissions under § 61.213, unless an equivalent or alternate method has been approved by the Administrator, shall use the following test methods:

(1) Test Method 1 of Appendix A to Part 60 shall be used to determine sample and velocity traverses;

(2) Test Method 2 of Appendix A to Part 60 shall be used to determine velocity and volumetric flow rate;

(3) Test Method 3 of Appendix A to Part 60 shall be used for gas analysis.

(4) Test Method 5 of Appendix A to Part 60 shall be used to collect particulate matter containing the polonium-210; and

(5) Test Method 111 of Appendix B to this part shall be used to determine the polonium-210 emissions.

§ 61.125 Monitoring of operations.

(a) The owner or operator of any source subject to this subpart using a wet-scrubbing emission control device shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate with ± 250 pascals (± 1 inch of water). Records of these measurements shall be maintained at the source and made available for inspection by the Administrator for a minimum of 2 years.

(b) The owner or operator of any source subject to this subpart using an electrostatic precipitator control device shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the primary

and secondary current and the voltage in each electric field. Baseline operating values for these parameters shall be maintained with ± 30 percent of their baseline operating values.

(c) For the purpose of conducting an emission test under Section 61.123, the owner or operator of any source subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the phosphate rock feed to any affected calciner or nodulizing kiln. The measuring device used must be accurate to within ± 5 percent of the mass rate over its operating range.

§ 61.126 Waiver of compliance.

(a) To request a waiver, applicants shall follow the requirements of § 61.10(b)-(d).

(b) The following provisions also apply:

(1) The owner or operator of any existing source, or any new source to which a standard prescribed under this part is applicable which had an initial startup which preceded the effective date of a standard prescribed under this part shall, within 90 days after the effective date, provide the following information in writing to the Administrator:

(i) Name and address of the owner or operator.

(ii) The location of the source.

(iii) The annual quantity of polonium-210 emitted (in Ci/y for the most recent calendar year).

(iv) A brief description of the nature, size, design, and method of operation of the stationary source including the operating design capacity of such source. Identify each point of emission for each hazardous pollutant.

(v) The average amount of polonium-210 being processed by the source over the last 12 months preceding the date of the report.

(vi) A description of the existing control equipment for each emission point.

(A) Primary control device(s) for radionuclide emissions.

(B) Secondary control device(s) for radionuclide emissions.

(C) Estimated control efficiency (percent) for each control device.

(vii) A statement by the owner or operator of the source as to whether he can comply with the standards prescribed in this part within 90 days of the effective date.

2. Appendix B to Part 61 is amended by adding Test Method 111 as follows:

Appendix B—[Amended]

Method 111—Determination of Polonium-210 Emissions From Stationary Sources

Performance of this method should not be attempted by persons unfamiliar with the use of equipment for measuring radioactive disintegration rates.

1.0 Applicability and Principle.

1.1 Applicability

This method is applicable to the determination of polonium-210 emissions in particulate samples collected in stack gases. Samples should be analyzed within 30 days of collection to minimize error due to growth of polonium-210 from any lead-210 present in the sample.

1.2 Principle

A particulate sample is collected from stack gases as described in Method 5 of Appendix A to 40 CFR Part 60. The polonium-210 in the sample is put in solution, deposited on a metal disc, and the radioactive disintegration rate measured. Polonium in acid solution spontaneously deposits on surfaces of metals that are more electropositive than polonium. This principle is routinely used in the radiochemical analysis of polonium-210.

2.0 Apparatus.

- 2.1 Alpha spectrometry system consisting of a multichannel analyzer, biasing electronics, silicon surface barrier detector, vacuum pump and chamber.
- 2.2 Constant temperature bath at 85 °C.
- 2.3 Polished silver discs, 3.8 cm diameter, 0.4 mm thick with a small hole near the edge.
- 2.4 Glass beakers, 400 ml, 150 ml.
- 2.5 Hot plate, electric.
- 2.6 Fume hood.
- 2.7 Telfon¹ beakers, 150 ml.
- 2.8 Magnetic stirrer.
- 2.9 Stirring bar.
- 2.10 Plastic or glass hooks to suspend plating discs.
- 2.11 Internal proportional counter for measuring alpha particles.
- 2.12 Nuclepore¹ filter membranes, 25 mm diameter, 0.2 micrometer pore size or equivalent.
- 2.13 Planchets, stainless steel, 32 mm diameter with 1.5 mm lip.
- 2.14 Transparent plastic tape, 2.5 cm wide with adhesive on both sides.
- 2.15 Epoxy spray enamel.
- 2.16 Suction filter apparatus for 25 mm diameter filter.
- 2.17 Wash bottles, 250 ml capacity.
- 2.18 Plastic graduated cylinder, 25 ml capacity.
- 3.0 Reagents.
- 3.1 Ascorbic acid, Reagent grade.
- 3.2 Ammonium hydroxide (NH₄OH) 15 M, Reagent grade.
- 3.3 Distilled water meeting ASTM specifications for Type 3 Reagent Water. ASTM Test Method D 1193-77 (incorporated by reference Section 61.18).
- 3.4 Ethanol (C₂H₅OH), 95 percent, Reagent grade.
- 3.5 Hydrochloric acid (HCl), 12 M, Reagent grade.

- 3.6 Hydrochloric acid, 1 M, dilute 63 ml of the 12 M Reagent grade HCl to 1 liter with distilled water.
- 3.7 Hydrofluoric acid (HF), 29 M, Reagent grade.
- 3.8 Hydrofluoric acid, 3 M, dilute 52 ml of the 29 M Reagent grade HF to 500 ml with distilled water. Use a plastic graduated cylinder and storage bottle.
- 3.9 Lanthanum carrier, 0.1 mg La^{+3} /ml. Dissolve 0.078 gram Reagent grade lanthanum nitrate, $\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$ in 250 ml of 1 M HCl.
- 3.10 Nitric acid (HNO_3), 16 M, Reagent grade.
- 3.11 Perchloric acid (HNO_4), 12 M, Reagent grade.
- 3.12 Polonium-209 solution.
- 3.13 Commercial silver cleaner.
- 3.14 Degreaser.
- 3.15 Standard solution of plutonium or americium.
- 3.16 Volumetric flask, 100 ml, 250 ml.

4.0 Procedure.

4.1 Sample Preparation

- 4.1.1 Place filter collected by EPA Method 5 of Appendix A to 40 CFR Part 60 in Teflon beaker, add 30 ml of 29 M hydrofluoric acid, and evaporate to near dryness on hot plate in a properly operating fume hood. *Caution:* Do not allow residue to go to dryness and overheat. This will result in a loss of polonium.
- 4.1.2 Repeat the procedure described in Section 4.1.1 until the glass fiber filter is dissolved.
- 4.1.3 Add 100 ml of 16 M nitric acid to residue in Teflon beaker and evaporate to near dryness. *Caution:* Do not allow residue to go to dryness and overheat.
- 4.1.4 Add 50 ml of 16 M nitric acid to residue from Section 4.1.3 and heat to 85 °C.
- 4.1.5 Transfer acid solution into a 150 ml glass beaker and add 10 ml of 12 M perchloric acid.
- 4.1.6 Heat acid mixture until dense perchloric acid fumes are evolved.
- 4.1.7 Dilute sample with 1 M HCl to a volume of 250 ml in a volumetric flask.

4.2 Sample Screening

The samples are checked for radioactivity levels to avoid contamination of the alpha spectrometry system. Use the following screening method:

- 4.2.1 Twenty ml of 1 M HCl are added to a 150 ml beaker.
- 4.2.2 One ml of the lanthanum carrier solution, 0.1 mg lanthanum per ml, is added to beaker.
- 4.2.3 A 1 ml aliquot of solution from Section 4.1.7 is added to the beaker.
- 4.2.4 Three ml of 15 M ammonium hydroxide are added to the beaker.
- 4.2.5 The solution from Section 4.2.4 is allowed to stand for a minimum of 30 minutes.
- 4.2.6 The solution is filtered through a filter membrane using suction.
- 4.2.7 The membrane is washed with 10 ml of distilled water and 5 ml of ethanol.

4.2.8 The membrane is allowed to air dry and then mounted, filtration side up, on a planchet lined with double-side plastic tape.

4.2.9 The membrane is radioassayed using an internal proportional alpha counter.

4.2.10 The activity of the original solution from Section 4.1.7 is calculated using Eq. 111-1.

(Eq. 111-1)

$$P = \frac{250 C_S - C_B}{2.22 E_L A_L T}$$

where:

P = total activity of original solution from Section 4.1.7, in pCi.

C_S = total counts of screening sample.

C_B = total counts of procedure background. (See 4.6).

(Eq. 111-2)

$$A_S = \frac{250 (\text{desired picocuries in aliquot})}{P}$$

A_S = aliquot to be analyzed in ml.

P = total activity, as calculated with Eq. 111-1.

4.3 Preparation of silver disc for spontaneous electrodeposition.

4.3.1 Clean both sides of disc with a mild abrasive commercial silver cleaner.

4.3.2 Clean both sides of disc with degreaser.

4.3.3 Place disc on absorbent paper and spray one side with epoxy spray enamel. This should be carried out in a well-ventilated area, with the disc lying flat to keep paint on one side only.

4.3.4 Allow paint to dry for 24 hours before using disc for deposition.

4.4 Sample Analysis

4.4.1 Add the aliquot of solution from Section 4.1.7 to be analyzed as determined in Section 4.2.11 to a suitable 200 ml container to be placed in a constant temperature bath. Note, aliquot volume may require a larger container.

4.4.2 Add an aliquot of polonium-209 tracer solution (see Section 7.0) that contains approximately the same amount of activity as that in the aliquot of the sample to be analyzed as determined in Section 4.2.11.

4.4.3 If necessary, bring the volume to 100 ml with 1 M HCl. If the aliquot volume exceeds 100 ml, use total aliquot.

4.4.4 Add 200 mg of ascorbic acid and heat solution to 85 °C in a constant temperature bath.

4.4.5 Stirring of the solution must be maintained while the solution is in the constant temperature bath for plating.

4.4.6 Suspend a silver disc in the heated solution using a glass or plastic rod with a hook inserted through the hole in the disc. The disc should be totally immersed in the solution at all time.

4.4.7 Maintain the disc in solution for 3 hours while stirring.

4.4.8 Remove the silver disc, rinse with distilled water and allow to air dry at room temperature.

4.5 Measurement of Polonium-210

E_L = counting efficiency as determined in Section 8.0, counts per minute per disintegration per minute.

2.22 = disintegrations per minute per picocurie.

A_L = aliquot used in Section 4.2.3 in ml if different from 1 ml.

T = counting time in minutes for sample and background (which must be equal).

250 = volume of solution from Section 4.1.7 in ml.

4.2.11 Determine the aliquot volume of solution from Section 4.1.7 to be analyzed for polonium-210 using results of the calculation described in Section 4.2.10. The aliquot used should contain an activity between 1 and 4 picocuries.

4.5.1 Place the silver disc, with deposition side (unpainted side) up, on a planchet and secure with double-side plastic tape.

4.5.2 Place the planchet with disc in alpha spectrometry system and count for 1000 minutes.

4.6 Determination of Procedure Background Background counts used in all equations are determined by performing the specific analysis required using the analytical reagents only. This should be repeated every 10 analyses.

4.7 Determination of Instrument Background Instrument backgrounds of the internal proportional counter and alpha spectrometry system should be determined on a weekly basis. Instrument background should not exceed procedure background. If this occurs, it may be due to a malfunction or contamination.

5.0 Calculation of Polonium-210 Activity.

5.1 Calculate the activity of polonium-210 on a sample filter using Eq. 111-3

Eq. 111-3

$$A = \frac{C_T - C_B L}{2.22 E_V E_C T D}$$

where:

A = picocuries of polonium-210 per filter.

C_T = total counts in polonium-210 spectral region.

C_B = procedure background counts in polonium-210 spectral region.

L = dilution factor. This is the volume in ml of solution in Section 4.1.7 (250 ml) divided by volume in ml used in Section 4.4.1.

2.22 = disintegrations per minute per picocurie.

E_V = fraction of polonium recovered on the planchet. Given by:

¹ Mention of registered trade names or specific products does not constitute endorsement by the Environmental Protection Agency.

$$E_y = \frac{B_T - B_B}{2.22 F E_C T}$$

where:

B_T = polonium-209 tracer counts in sample.
 B_B = procedure background counts measured in polonium-209 spectral region.

F = activity in picocuries of polonium-209 added to sample—from Eq. 111-7.

2.22 = disintegrations per minute per picocurie.

E_C = See below.

T = See below.

E_C = counting efficiency of detector used, given by Eq. 111-6, as counts per minute per disintegration per minute.

T = counting time, specified in Section 4.5.2 and 7.11 as 1000 minutes for all alpha spectrometry sample and background counts.

D = decay correction for time "t" (in days) from sample collection to sample counting, given by: $D = e^{-0.0044t}$

5.2 Procedure for Calculating Emission Rate in Curies per Metric Ton of Phosphate Rock Processed

Calculate the polonium-210 emission per metric ton of rock processed from each run at each stack using equation 111-4. The emission rate from each stack is determined by averaging the emission rates calculated for each of the three runs at each stack.

(Eq. 111-4)

$$R_s = \frac{1 \times 10^{-12} A Q_{SD}}{V_{SD} M_H}$$

Where:

R_s = emission rate from stack, in curies of polonium-210 per metric ton of rock processed.

A = picocuries of polonium-210 in filter sample as determined by A in Eq. 111-3.

Q_{SD} = volumetric flow rate of effluent stream in dry standard m^3/hr as determined by Method 2 of Appendix A to 40 CFR Part 60.

V_{SD} = total volume of air sample in dry standard m^3 as determined by Method 5 of Appendix A to 40 CFR Part 60.

M_H = rock processing rate during sampling in metric tons/hr.

1×10^{-12} = curies per picocurie.

5.3 Average Stack Emission Rate Calculation

Determine the average stack emission rate from the average of the three emission rates calculated in Section 5.2. Perform these calculations for each stack of each calciner.

5.4 Calciner Emission Rate Calculation
 Determine each calciner's emission rate (X_i) by taking the sum of the emission rates from all stacks of each calciner.

5.5 Annual Polonium-210 Emission Calculation

Determine the annual elemental phosphorus plant emissions of polonium-210 by taking the sum of emission rates at each calciner (X_i in 5.4) and

multiplying this sum by the annual metric tons of phosphate rock processed by that calciner, according to Eq. 111-5.

(Eq. 111-5)

$$S = X_1 M_1 + X_2 M_2 + \dots + X_N M_N$$

Where:

S = annual polonium-210 emissions in curies from the elemental phosphorus plant.

X_i = emission rate from a calciner (i) in curies per metric ton, as determined in Section 5.4.

N = number of calciners at the elemental phosphorus plant.

M_i = phosphate rock processed per year, in metric tons for each calciner.

6.0 Standardization of Alpha Spectrometry System.

6.1 Obtain a standardized solution of an alpha-emitting actinide element such as plutonium-239 or americium-241. Add a quantity of the standardized solution to a 100 ml volumetric flask so that the final concentration when diluted to a volume of 100 ml will be approximately 1 pCi/ml. Add 10 ml of 16 M HNO_3 and dilute to 100 ml with distilled water.

6.2 Add 20 ml of 1 M HCl to each of six 150 ml beakers.

6.3 Add 1.0 ml of lanthanum carrier, 0.1 mg lanthanum per ml, to the acid solution in each beaker.

6.4 Add 1.0 ml of actinide solution from Section 6.1 to each beaker.

6.5 Add 5.0 ml of 3 M HF to each beaker.

6.6 Cover beakers and allow solutions to stand for a minimum of 30 minutes.

6.7 Filter each solution through a filter membrane using this suction filter apparatus.

6.8 After each filtration, wash the filter membrane with 10 ml of distilled water and 5 ml of ethanol.

6.9 Allow the filter membrane to air dry on the filter apparatus.

6.10 Carefully remove the filter membrane and mount with double-side tape on the inner surface of a planchet. Mount filter with filtration side up.

6.11 Place planchet in an alpha spectrometry system and count each planchet for 1000 minutes.

6.12 The counting efficiency of each detector can be calculated using Eq. 111-6.

(Eq. 111-6)

$$E_C = \frac{C_s - C_b}{2.22 A_A T}$$

where:

C_s = gross counts in actinide peak.

C_b = background counts in same peak area as C_s .

2.22 = disintegrations per minute per picocurie.

A_A = picocuries of actinide added.

E_C = counting efficiency, counts per minute per disintegration per minute.

T = counting time in minutes, specified in Section 6.11 as 1000 minutes.

6.13 Determine the average counting efficiency for each detector by calculating the average of the six determinations.

7.0 Preparation of Standardized Solution of Polonium-209.

7.1 Obtain polonium-209 solution from an available supplier. Add a quantity of the Po-209 solution to a 100 ml volumetric flask so that the final concentration when diluted to a 100 ml volume will be approximately 1 pCi/ml. Add 10 ml of 16 M HNO_3 and dilute to 100 ml with distilled water.

7.2 Add 20 ml of 1 M HCl to each of six 150 ml beakers.

7.3 Add 1.0 ml of lanthanum carrier, 0.1 mg lanthanum per ml, to the acid solution in each beaker.

7.4 Add 1.0 ml of polonium-209 tracer from Section 7.1 to each beaker.

7.5 Add 3.0 ml of 15 M ammonium hydroxide to each beaker.

7.6 Cover beakers and allow to stand for a minimum of 30 minutes.

7.7 Filter the contents of each beaker through a separate filter membrane.

7.8 After each filtration, wash membrane with 10 ml of distilled water and 5 ml of ethanol.

7.9 Allow filter membrane to dry on filter apparatus.

7.10 Carefully remove the filter membrane and mount with double-side tape on the inner surface of a planchet. Mount filter with filtration side up.

7.11 Place planchet in alpha spectrometry system and count each planchet for 1000 minutes.

7.12 The activity of the polonium solution can be calculated using Eq. 111-7.

(Eq. 111-7)

$$F = \frac{C_s - C_b}{2.22 E_C T}$$

where:

F = activity of polonium-209 solution, in pCi.

C_s = gross counts of polonium-209 in the 4.88 MeV region of the spectrum in the counting time T .

C_b = background counts in the 4.88 MeV region of spectrum in the counting time T .

2.22 = disintegrations per minute per picocurie.

E_C = counting efficiency of detector used, counts per minute per disintegration per minute.

T = counting time, specified in Section 7.11 as 1000 minutes.

7.13 Determine the average activity of the polonium-209 solution from the six determinations.

7.14 Aliquots of the solution from Section 7.1 are to be used as tracer with each polonium-210 analysis.

8.0 Standardization of Internal Proportional Counter.

- 8.1 Obtain a standardized solution of an alpha-emitting actinide element such as plutonium-239 or americium-241. Add a quantity of the standardized solution to a 100 ml volumetric flask so that the final concentration when diluted to a 100 ml volume will be approximately 100 pCi/ml. Add 10 ml of 16 M HNO₃ and dilute to 100 ml with distilled water.
- 8.2 Add 20 ml of 1 M HCl to each of six 150 ml beakers.
- 8.3 Add 1.0 ml of lanthanum carrier, 0.1 mg lanthanum per ml, to the acid solution in each beaker.
- 8.4 Add 1.0 ml of the actinide solution from Section 8.1 to each beaker.
- 8.5 Add 5.0 ml of 3 M HF to each beaker.
- 8.6 Cover beakers and allow solutions to stand for a minimum of 30 minutes.
- 8.7 Filter each solution through a filter membrane using the suction filter apparatus.
- 8.8 After each filtration, wash membrane with 10 ml of distilled water and 5 ml of ethanol.
- 8.9 Allow filter membrane to dry on filter apparatus.
- 8.10 Carefully remove filter membrane and mount with double-side tape on the inner

surface of a planchet. Mount filter with filtration side up.

- 8.11 Place planchet in internal proportional counter and count for 100 minutes.
- 8.12 The counting efficiency of the internal proportional counter is determined as follows from the six samples:

(Eq. 111-8)

$$E_B = \frac{C_S - C_B}{2.22 A_A T}$$

where:

E_i = counting efficiency of proportional counter, counts per minute per disintegration per minute.

C_S = gross counts of standard.

C_B = gross counts of procedure background.

2.22 = disintegrations per minute per picocurie.

A_A = picocuries of actinide added.

T = counting time in minutes, specified in Section 8.11 as 100 minutes.

8.13 Determine the average counting efficiency of the six determinations.

9.0 *Quality Assurance.*

9.1 *General Requirements*

9.1.1 All analysts using this method are required to demonstrate their ability to use the method and to define their respective accuracy and precision criteria.

9.1.2 The minimum requirements for the establishment of accuracy and precision criteria is four replicate analyses of an externally prepared performance evaluation sample.

9.2 *Specific Requirements*

9.2.1 Each sample will be analyzed in duplicate.

9.2.2 Every tenth sample will be an externally prepared performance evaluation sample submitted by the Quality Assurance Officer.

9.2.3 Duplicate measurements are considered acceptable when the difference between them is less than two standard deviations as described in EPA 600/4-77-001 or subsequent revisions.

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